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The Professional Pledge of the

CERTIFIED PROPERTY MANAGER

I HEREBY PLEDGE MYSELF to act in strict accordance with the principles, declarations, and regulations of The Institute of Real Estate Management.

I PLEDGE MYSELF in particular to place honesty and thorough work above all else in my administration of real property; to advance myself constantly in knowledge and ability through the study of literature on real estate management, the instruction of eminent teachers, the interchange of experiences with fellow Certified Property Managers, and attendance at meetings of the Institute whenever possible; to be faithful to the personal interests of my professional brothers and to seek their counsel when in doubt of my own judgment; to render willing help to my fellow Certified Property Managers; and to give my services freely to the Institute as required or desired.

MOREOVER, I PLEDGE MYSELF to shun unwarranted personal publicity and dishonest money seeking as disgraceful to our profession; to render complete, thorough, and honest service to landlord and tenant alike regardless of monetary consideration; to strive assiduously to build goodwill for the properties under my charge and to use my best talents at all times to preserve and maintain the value of such properties; to secure the greatest possible net return to the owners of properties entrusted to my management; and to give devoted attention to the safety and comfort of tenants of these properties.

FINALLY, I PLEDGE MYSELF to cooperate in advancing and extending, by every lawful means within my power, the influence of The Institute of Real Estate Management.

The Institute of Real Estate Management
of the National Association of Real Estate Boards

The Editor's Review

MAINTENANCE—DEFERRED

MANY property owners are at present between two fires. Rentals of residential properties are being held far below the current price level on the one hand, while operating costs have advanced from 50 per cent to 100 per cent on the other. Management therefore is faced with the dual problem of maintaining investments in prime physical condition and at one and the same time producing income or dividends plus adequate depreciation reserves.

The management of corporate industry in America has generally been entrusted to leaders who have taken the long range viewpoint. Dividends, to them, have been important—but seldom have they allowed their plants, factories and buildings to suffer physically in order to maintain or increase dividends. If that had occurred, this nation never could have met successfully the tremendous demands of war immediately after the worst depression in over 150 years.

However, real estate management has seldom shown, unfortunately, the economic, financial or industrial statesmanship that has been exhibited by the leaders of corporate enterprise. And until the managers of real estate do demonstrate true statesmanship, they never will have the regard of the public to which they should be entitled.

Except in unusual instances, real estate management is being asked to perform an impossible task. But the only long-run solution to present problems lies in first preserving the physical condition of buildings so that they can, in the future, produce income. Millions of America's buildings today are being allowed to deteriorate into a state of disrepair which is appalling. Of course, these structures, under the stress of a housing shortage, remained well occupied —but a day of reckoning lies ahead—the day when supply comes into closer balance with housing demand. At that time, the buildings in which managers have allowed deferred maintenance to accrue will feel the sudden impact of vacancies and foreclosures. And no one will be to blame but the owners—*and managers also.*

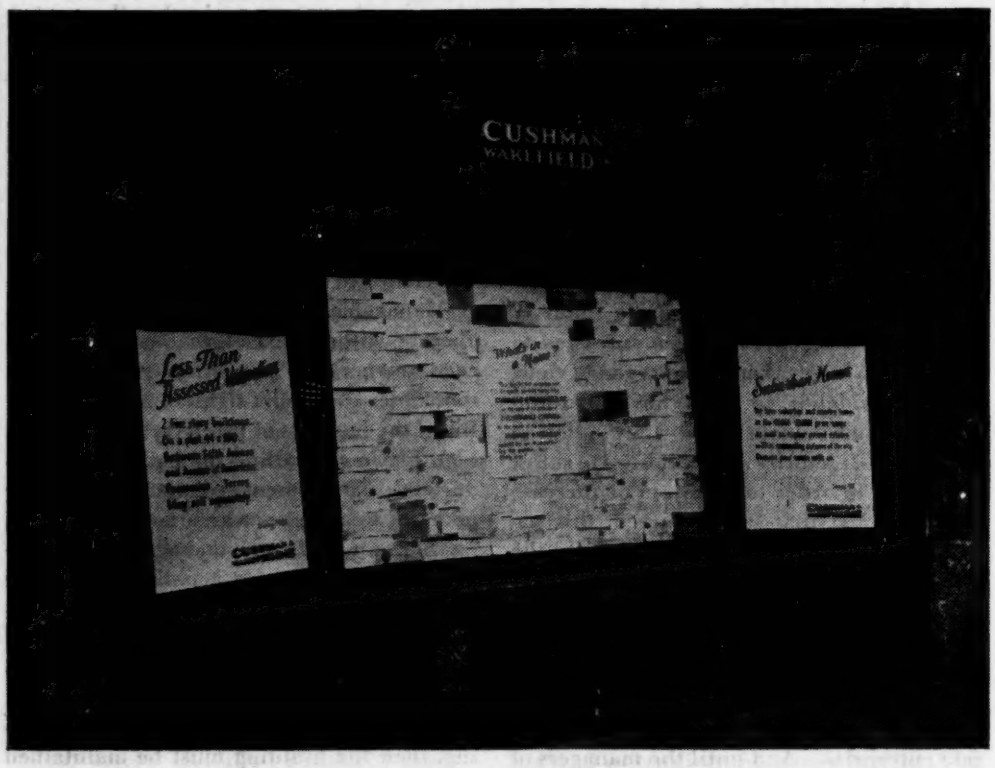
To date (in the realty field), the functions of Management have not been allowed to operate without excessive owner interference—ownership too often implies irresponsible and short-sighted Management. But if the business of property management is to become a calling on a plane with industrial management, cognizance must be taken of weaknesses which now exist. It is far better to refuse a management assignment than to become a pallbearer in the wake of a bankrupt and physically depleted structure a few years hence.

Management cannot perform an impossible task, but where the choice lies between producing income or maintaining a building, then the building must be maintained at the cost of income if there is a reasonable assurance that the utility of and the demand for that structure will not diminish in the near or distant future.

There is another factor to which Management in the field of real estate has paid altogether too little attention to date, and that concerns public policy. Landlord—tenant relationships have been difficult because Management paid too little attention to public policy and public relations. Of course industry was not always as well regarded

by the public as it is today. Owner-Management of the sweat-shops of a century ago has disappeared because of the force of public opinion, and as industrial Management has grown, it has to a great degree, won the approbation of the American public.

Today Management, as represented in the field of real estate, is standing at the crossroads. What is needed is the greatest breadth of vision if the respect and confidence of the American public is to be won and held.—R.H.A.



ONE WAY TO WIN ATTENTION

CUSHMAN & WAKEFIELD, INC., New York real estate brokerage and management firm, has found a novel way to publicize its name and address. In one of their six show windows on the ground floor at 281 Madison Avenue they have placed a large window card on which they have fastened several hundred envelopes saved over a period of years addressed to the firm at the wrong address and with the name of the firm and various members of the organization misspelled in a startling variety of ways. The two most frequent errors were in the misspelling of the names of the senior officers, J. Clydesdale Cushman and Bernard Wakefield. The Post Office Department is to be congratulated on being able to deliver such mis-addressed mail.

PERCENTAGE LEASES

By *Stanley L. McMichael, MAI*

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A PERCENTAGE lease is one wherein the tenant is required to pay as rental a specified percentage of the gross income from the total sales made upon the premises. To the ordinary covenants of a lease are added certain clauses governing the manner in which business may be conducted, how the percentage is estimated, and, finally, how it is paid to the landlord.

The principle of the percentage lease is not new. In early European days the barons exacted from their serfs a percentage of the crops on lands allotted for cultivation. The modern share-cropper system is a later example, wherein a farmer pays as rent to the landowner a portion of all he raises upon the fields allotted him.

Types of Percentage Leases

There are five commonly accepted types of percentage leases:

1. Lease calling for a definitely stated percentage of gross sales as rental with no minimum or maximum stated.
2. Lease with a definitely indicated rental, to which is added a stated percentage of gross sales over and above a given amount.
3. Lease calling for a stated percentage of gross sales as rental with a guaranteed minimum.
4. Lease with rental based on percentage of gross sales with both minimum and maximum guarantees provided.
5. Lease providing that the landlord shall receive as rental a percentage of all *profits* arising from occupancy.

Lease type 1 is not favored except when a landlord is satisfied that a tenant is so strong that he will do a satisfactory business, or the property is so weak that no tenant will take a percentage lease on other than these terms. Most landlords require a *recapture clause* with a no-guarantee lease, enabling them to cancel the lease after a certain period in the event a reasonable rental has not been earned.

Lease type 2 is one in which the landlord sets a certain rental, usually sufficient to meet carrying expenses of the property and a return of, say, 6 per cent on his reasonably appraised investment, and then collects an additional percentage after a certain volume of business has been done. Few landlords demand this form of lease and fewer tenants like to operate under it.

Lease type 3, in which the tenant operates under a stated percentage of gross sales with a minimum guarantee, is the commonest and most satisfactory form of percentage lease.

Lease type 4 is one calling for both a minimum and maximum guarantee. Few landlords will give a lease with a maximum guarantee because it violates the whole theory upon which percentage leases operate, namely, that the property should receive its just share as rental no matter how

* All subheads have been added by the editors.

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large the volume of business conducted. The minimum guarantee is reasonable because it enables the tenant to exist if business is bad and allows the landlord to go along with his percentage of rental on the sales made until conditions improve and rentals are increased.

Lease type 5, in which the landlord collects as rental a part of the profits earned, is rare and really takes the form of a partnership between landlord and tenant. Some legal minds maintain that the landlord can be held responsible for the debts of such a concern should the tenant fail. This type of lease is not recommended.

Lease Variations

There are other variations of the percentage lease idea which can be applied to situations as they arise. For instance, in making some drug store leases, different percentages are applied to different departments such as soda fountain, cigars and cigarettes, liquors, lunch counter, drugs, and other types of goods sold in such establishments.

Another variation was found in a lease made in Chicago where for the first half of a fifteen-year lease no minimum guarantee was exacted. The percentages paid on net business for the full fifteen-year term were 8 per cent up to $200,000, 9 per cent on the next $50,000, and 10 per cent on all business over $250,000. The lessor reserved the right to cancel the lease (this is what is meant by *recapture*) at the end of 7½ years or at the end of any year thereafter upon ninety days written notice in the event the lessee had not done, during the year immediately preceding the date of such cancellation, a business sufficient to insure a rental for that year of $24,000. To avoid cancellation, however, the tenant had the right to make up any deficiency in rent demanded and to remain for another year, at which time the same arrangement could be repeated. Under this setup it may be observed that the landlord had his rental for the last half of the term guaranteed at $24,000 annually or the tenant would have to vacate.

All tenants are not qualified to be given percentage leases. Only those that are well established and financially responsible, have proved business records, and can successfully carry on can expect to be accepted by landlords. Equally important is the class of property on which percentage leases may be imposed. For the most part, this must be in the high-powered retail districts of thriving cities and towns. Secondary and low-grade property does not readily lend itself to this type of tenancy.

Advantages and Disadvantages

Likewise, there are advantages and disadvantages in percentage leases themselves. These have been summarized by Millard C. Holbrook, of Portland, Oregon, as follows:

ADVANTAGES

1. Proper knowledge of percentage leases gives a scientific basis for all forms of rental leases.
2. The percentage lease offers a compromise between tenant's and landlord's differences regarding rental values.
3. The percentage lease does not lend itself to speculation.
4. The percentage lease encourages the proper utilization of real estate.
5. The corporation tenant has a well-organized sales management whose position is usually dependent on volume of business. If a million dollars business is done yearly—one hundred thousand dollars may be paid cheerfully.

DISADVANTAGES

1. The owner seldom has sufficient knowledge to make a proper decision, and realtors generally have not given the subject sufficient study.
2. The success of the percentage lease is dependent on the selection of a proper tenant. This tenant may die or be incapacitated.
3. There is no percentage lease written that a careless or dishonest tenant can not take advantage of.

4. Collection of rental requires more labor and is more involved.
5. Percentage leases encourage tenants, who are not trained merchants, to pioneer and take a chance.
6. The realtor's fee is difficult to determine, and collect.
7. The percentage lease makes an unequal partnership, because success is dependent on one partner, the tenant.

Favorable and unfavorable aspects of percentage leases are summarized by *Chain Store Age*, devoted to the interests of the large number of chain store enterprises doing business throughout the country, as follows:

1. A percentage lease automatically controls the ratio between rental and sales.
2. A percentage lease possesses advantages to the chain whenever future sales volume is rendered uncertain by reason of (*a*) the undeveloped character of the locality; (*b*) the danger of excessive competition; (*c*) other adverse factors which can neither be foreseen nor forestalled.
3. A percentage lease is likewise favorable from a chain store standpoint in cases where the gross margin is necessarily small and rigid control of every item of expense is essential to protect net profit.
4. The thought that a percentage lease introduces an element of speculation or gambling into business is fallacious. While the *amount* of rent paid under this form of lease varies from year to year as the gross sales vary, the *ratio* of rent to sales remains fixed. In the case of a flat rental, the amount of rent remains fixed but the *ratio* between rent and sales necessarily varies. There is just as much speculation in the latter case as there is in the former, and from the standpoint of conservative operation it would seem more dangerous to gamble upon ratio of expense to sales than upon its amount.
5. A percentage lease is undesirable from a chain store standpoint when it contains a minimum clause which insures the owner a fair return on his property and, in addition, a share of the tenant's profits. In such cases, the chain has little to gain and possibly much to lose.
6. When the owner insists upon a minimum rental in a percentage lease, the tenant should be protected by a maximum clause.
7. A percentage lease offers no advantage to a chain which is able to estimate its sales with any degree of accuracy, which is interested only in 100% locations, and which is proof against competition. The ratio of rent to sales may reasonably be expected in such cases to diminish from year to year on a straight rental basis, whereas a percentage lease would surrender that advantage to the owner.
8. A percentage lease offers but slight advantage to a chain where the gross margin is comparatively high and which has a great number of stores in various localities. Abnormally high rent ratios due to unexpectedly diminished sales in a few stores are usually offset in such cases by abnormally low rent ratios due to unexpectedly heavy sales in others.

Lease Forms

The ablest chain store brokers throughout the country are opposed to any "model" or "form" percentage lease, claiming that each one should be tailor-made to fit the tenant. Conditions vary so much in each instance that the lease should be compiled, clause by clause, until every contingency is covered. This does not mean that model forms cannot be employed and that typical clauses that have stood the test of time should not be included. There is no more opportunity for having a so-called "model" lease that will fit every type of situation than there is for having any uniform percentage of gross sales that can be applied to one type of business indiscriminately, no matter where a property is situated.

Acceptable Tenants

Just as the percentage lease is not adaptable to the needs of a great many tenants and to many businesses, so is it not adaptable to those businesses in which a large percentage of their revenue is derived from the *sale of services* as contrasted with the actual *sale of goods.*

Landlords generally have to be educated to the accepting of tenants on percentage leases. They have been accustomed to setting a rental on their property and have accepted any fairly reputable concern that offered itself as a tenant. In accepting a tenant on a percentage basis, however, they want to feel that the concern is not only

responsible financially but also that it will conduct itself in an aggressive manner and earn for the landlord the largest percentage of rent consistent with the type of business and the location. In this connection, Harold H. Egan, chain store broker of Chicago, has classified tenants, on the basis of their own responsibility, into three general divisions, as follows:

1. Highly responsible business organizations (many of which are chain stores) whose merchandising methods have been proved sound and whose accounting systems and business veracity may be depended upon. This class is entitled to a percentage lease and will sometimes insist upon a no-guarantee contract where the supply of stores exceeds the demand.
2. Local merchants or small chains whose dependability has been proved by successful operation over a period of years in the same district wherein the new space is situated, or in a similar district. This class is often deserving of a percentage lease. But each case should be governed by the particular circumstances surrounding it.
3. All other merchants, including mainly those of poor financial standing or unfavorable records, those starting business on a shoestring, and the downright fly-by-nighters. The store owners belonging to this class are bad risks and it would probably be a mistake to take any of them on a percentage basis. The main argument against this type is the lack of true and accurate information as to their actual sales. Other reasons are bad management and poor merchandising methods or practices which might reflect upon the property and tend to give it a bad name.

Establishing Rentals

It is the sincere desire of most fair-minded landlords to establish a rental for their premises on the basis of what a store location will earn for a properly qualified tenant. They are first concerned in fixing a minimum rental at a point where they will be protected in their overall carrying charges, such as taxes, repairs, and the general items of maintenance for which the landlord is responsible. Then they want a guaranteed return on their property investment, say at a 6 per cent rate. After this has been established, they are usually willing to gamble with tenants that they will receive more on percentage on gross sales over the minimum set than they would in straight rent. Another way to set the minimum is for the landlord to make up his mind what he would want for the premises on a straight flat rental and then to take 75 per cent of that as his minimum under a percentage lease.

There has been an inclination on the part of some successful merchants operating under percentage leases—which have resulted in the paying of excellent returns to landlords—to demand that maximum ceilings be placed in percentage leases. This, of course, is a violation of the principle that a property is worth what it will earn. If it does earn it, the property owner is entitled to his share.

In this connection, observations by Frank S. Slosson, prominent realty broker of Chicago, who has negotiated many percentage leases, are pertinent:

> A percentage lease presumes a fair and equitable percentage payment based upon the annual volume of sales as a rent charge on the part of the lessee. The minimum guarantee generally represents the least amount of rent which the owner is justified in accepting in order to make it possible for him to pay taxes, insurance, repairs and upkeep, depreciation and sometimes (all too infrequently) some pro rata return on his invested capital.
>
> The more overplus the tenant pays the more profits are received, because the increased sales volume returns profits out of proportion to increased operating overhead. There are numerous instances of store leases, previously not profitable to the property owner, under which operating tenants are paying in some cases more overplus than the minimum guarantee, because of unusual business activities, increased population and buying power. A changed condition may reverse the picture to the point that no overplus will be paid. For that reason, so long as the percentage applied to the particular line of business is fair and equitable, there is no justification for placing a ceiling, and any owner sub-

scribing to such a practice is only setting a precedent which later may give him and other owners much trouble and embarrassment. As a factual matter, instead of setting a ceiling, owners should, and justifiably so, accelerate the percentage as tenant's volume reaches substantially higher brackets.

Any percentage lease is a poor lease in which either the landlord or tenant exacts any unreasonable advantage. The contract should be one that will be fair to each side in good times and bad. The minimum should be as low as consistent with the safety of the owner's investment and the lessor should be permitted to enjoy his percentage return on the highest volume of business that the location will earn during the term of the lease. If adjustments are required, they can be negotiated when the lease comes up for renewal, or when the landlord asks the tenant to vacate because he believes another tenant is better qualified to occupy the premises.

Tenant Qualifications

Landlords must be alert in knowing what to look for in tenants for their properties. According to Joseph Laronge, prominent leasing broker of Cleveland, Ohio, a landlord must inquire concerning the following:

1. How much business can be expected of the applicant?
2. Is he an aggressive advertiser?
3. Is his past record of performance good?
4. Does he own other stores near by which might share business on the advertising he does?
5. What kind of goods will he sell and will they be priced to move readily on a competitive market?
6. Is this a "one man" business which might suffer if the owner became ill or died?
7. Will this tenant put the property to its highest and best use?
8. Does the acceptance of this tenant involve radical changes in a property, involving considerable expense? If so, who will pay for these changes?
9. Is the tenant willing to accept a *recapture* clause in his lease?

Special Stipulations

Mr. Laronge suggests the inclusion of a recapture clause in some percentage leases somewhat as follows:

> Lessor to reserve the right to repossess the premises at the end of . . . years if annual rental paid has not equaled . . . dollars. Lessee, within . . . days after receiving cancellation notice under this provision, may remit to lessor the difference between the rental paid and . . . dollars (being the amount that should be included after the word "equaled"), maintaining the lease in full force and rendering ineffective the cancellation right set forth therein.

There should be a stipulation requiring lessee to maintain continuous operation during customary hours with a view to producing maximum gross sales.

A clause should be included prohibiting lessee from owning, operating, or becoming financially interested in a similar business within . . . blocks in each direction of the leased premises.

Another desirable clause is one requiring lessee to operate under a predetermined name. Frequently, second and third choices may be inserted or the matter left to arbitration.

It is not uncommon to designate the minimum amount of annual advertising a lessee must do. This is usually based upon a percentage of the previous year's gross volume. Often, advertising mediums are likewise stipulated.

Many leases provide for an increasing percentage as sales reach predesignated upper brackets. This procedure is justified by the conclusion that the unit cost of each sale decreases after a certain figure is reached. Therefore, more can and should be allocated to rent.

To insure maximum return and to create lessee incentive, it is not unusual to grant to the tenant *exclusive merchandise rights* in the property of which the leased premises are a part.

Mr. Laronge cautions landlords against inserting too many prohibitive clauses in a lease, to the end that these will complicate operations or be calmly overlooked by the tenant once he becomes installed on the premises. A clear, definite understanding should be arrived at and then a lease that is concise yet complete should be written to cover the usual contingencies. Many legal matters usually covered by the laws of the land can be left out if they are not actual parts of the agreement.

The Chain Store Lease

On what basis should a chain store broker, representing the owner of a property suitable for imposing upon it a percentage lease, decide as to the type and conditions of a lease to be negotiated? Henry Wolfson, a prominent New York broker who has had wide experience in this field sums up the problem and answer as follows:

Assuming that the following conditions are met:

1. The tenant has capable management and necessary capital,
2. The business is suitable to the location and the space fits its requirements,
3. The type of business is not overdone in the locality,
4. Future competition will not materially affect the location, let us summarize the essentials of proper percentage leases under present conditions:
   1. A fair "minimum" guaranteed rental paid monthly.
   2. The maximum percentage on sales that the particular business can afford to pay.
   3. No "maximum" rental provision unless the guarantee covers carrying charges and the "maximum" provides a decent return.
   4. No "straight" percentage lease unless owner has unbounded faith in the location and the prospective tenant.
   5. No lease based on percentage of "profits"—there is too much room for disagreement there.
   6. Landlords should receive monthly or quarterly reports of sales duly verified by tenant.
   7. Tenant should be required to keep accurate books of account and landlord should have the right at stated intervals to examine them, or to make an audit.
   8. Payment of the "additional" rental due to the percentage feature should be paid as the particular type of business permits.
   9. Landlord should restrict tenant from establishing a similar store in the same locality and tenant should prohibit landlord from renting his adjoining property to competition.
   10. Fair play—as in every transaction.

Points to Watch

Leases based on the landlord being paid as rental a percentage of the profits of a business are not recommended by experienced brokers, unless the property owner literally wants to go into partnership with the tenant. There are altogether too many opportunities for difficulties to arise in the operation of the business and in determining just what profits actually do develop. Some such leases call for a minimum rental and then a portion of the profits earned.

Some of the earlier types of percentage leases proved unsatisfactory because the tenant simply paid as minimum rental the amount the landlord would have received on a straight lease. If the tenant had a good run of business, the landlord profited. If the business did not develop, the tenant went right along paying about the same rent he would have been obligated to pay under a flat lease. The only thing the tenant benefited from was the fact that he was not subjected to a graded lease with periodic step-ups. Most seasoned brokers maintain that a fair percentage lease should carry a minimum guarantee of from 20 per cent to 30 per cent less than the market value of the premises, but sufficient to carry the landlord's charges and a fair return on his investment.

Properties Other than Retail

Percentage leases are imposed on other properties than retail stores. A ninety-eight-year lease was made on the southwest

corner of Madison Street and Michigan Avenue in Chicago, beginning in 1928, in which, in addition to rentals called for in the lease, the lessee agreed to erect a thirty-nine-story building, known as the Willoughby Tower, and to pay the landlord a part of his excess earnings. The regular rental reserved in the lease was $125,000 a year for five years; $150,000 for five years; $160,000 a year for five years; and for the balance of the eighty-three years, $175,000 annually. In addition, the tenant agreed that he would pay the landlord one half of any excess over $75,000 per year, earned above carrying charges, for the first five years of the term, or in excess of $100,000 for any of the ninety-three years remaining. Time only will tell if this is a fair lease.

One of the biggest percentage leases ever negotiated, involving one of the highest grade business locations in New York, was executed in 1932 by a leading department store. This was the Stern Brothers Department store, occupying a site extending 234 feet along West 42nd Street, 100 feet on Sixth Avenue, and 442 feet on West 43rd Street. The lease called for a minimum guarantee of about $700,000 and 4⅛ per cent on gross sales.

The Percentage Lease Is Equitable

Ever since percentage leases came into general use there has been great speculation as to whether they favored the landlord more than the tenant, or vice versa. As a matter of fact, the percentage leasing system seems to be much more equitable to both parties than the old flat or graded leasing system. In the latter, the landlord demanded all that the traffic would bear, and if the location was a choice one, important firms would bid each other up into rental brackets which a great many concerns could not afford. With the percentage lease, this fault is done away with. The landlord, after being guaranteed enough to carry on his investment, gambles with the tenant as to how much rent his property will earn. If the tenant is a live, aggressive merchant, has good merchandising methods and connections, and works hard, he will win his reward, a portion of which goes to the landlord. If the merchant does not meet these standards, the landlord suffers. By and large, the percentage lease seems to be the fairest method yet devised of renting retail business property.

Qualifications of the Broker

The wisdom of having percentage leases made by brokers who know their ramifications and how to deal with the representatives of the chains which, for the most part, take them, has been demonstrated many times in many cities. Property owners who attempt to make their own leases usually fall into pitfalls they would have avoided if they have been properly counseled. The ideal way in any one city, of course, would be to have all such leases made through one central leasing agency, which could pick the tenants that were needed and place them in locations where they could do the most business, without having too many merchants of the same line clamoring for the available trade. This can be done, occasionally, in a smaller city. In the larger cities, however, the brokers do not know all of the landlords intimately, nor do the property owners get a chance to have demonstrated to them the sales ability of the more successful chain store brokers.

Seasoned chain store brokers have learned many things about grouping certain types of businesses. Men's hat stores, shoe stores, suit stores, and haberdashery concerns all tend to swell each other's volume. Likewise women's apparel, shoes, and related lines should be in close proximity.

Businesses getting their sales from many customers for small items, such as five and ten cent store goods, soda fountains, cigars, and so on, are favored by keen landlords over those getting business through large sales, such as furs, pianos, autos, and expensive jewelry. Telegraph offices, banks, and morticians are shunned by wise landlords.

Selection of Tenants

Concerns with low profit mark-ups invariably demand leases with low percentage rates. The claim that they attract more customers does not always result in the landlord getting more rent. Granting a low percentage to a tenant in a location which would just as quickly bring a larger percentage from a concern better adapted to use the location is simply poor business. *Wise landlords pick their tenants.*

A type of tenant to avoid is the one whose merchandise does not fit the location; likewise, the apparently successful local business dependent for its longevity and prosperity upon the activities of a single individual who may at any time pass out of the mercantile picture, through ill health or old age.

Incidental Lease Demands

Among the incidental things that many percentage leases demand are:

1. Require tenant to keep open the same hours as other competing merchants in the vicinity.
2. Require tenant to carry stocks comparable with competitors' lines.
3. Prohibit tenant from owning and operating another store in the same locality.
4. Limit tenant's right to assign his lease or to sublet without the property owner's consent.
5. Require monthly reports on volume of business done, although settlements of rent may be quarterly. If the broker is servicing this account and collects his commission on the volume of business done, it serves as a reminder to him that there is something wrong if business declines perceptibly.
6. Provide that percentages apply to all sales "in and from" the premises. This will take care of mail orders not accounted for otherwise.
7. Provide that percentages should apply to both merchandise and services.
8. Stipulate the lines of merchandise to be carried. During periods of shortages a tenant will frequently shift to other lines, on which the stipulated percentage rate of the lease may not be high enough.
9. Discourage price cutting by a tenant. Through price cutting, more volume may be obtained, but it may present a problem when the lease comes up for renewal and the tenant may demand a decrease in his percentage rate.
10. Require tenant to be frank and aboveboard with his landlord or the latter's agent and to give ample information about state and volume of business and any particular problems being encountered.
11. Require tenant to provide for ample expenditures for advertising to the end that as satisfactory volume of business shall be done as the location warrants.

Length of Lease Terms

As percentage leases gain in favor, the length of terms for which they are given is gradually being extended. Formerly many such leases were made for periods of five years. Most responsible firms now demand ten-year leases and many concerns, such as the big five and ten cent stores, want twenty years and some even thirty years with two additional options of ten years each—fifty years in all.

Financing

Many of the larger chains prefer to have buildings erected for their use and will lend their credit, if necessary, to aid a property owner get favorable financing to permit the erection of substantial improvements. This is done by the terms of the ground lease being agreed upon, plus the additional rental called for from the new building to be erected. The land may have a value of, say, $100,000, while the improvements to be placed thereon may cost $200,000. With

a sound lease from a large and substantial mercantile concern backing the deal, life insurance companies and other institutions will readily finance the entire transaction. In addition to the rental set, the chain will agree to pay a stipulated percentage on all business done above a certain minimum. At the expiration of a long-term lease, the improvements usually revert to the landlord, with possibly a first option to the tenant to renew on terms to be agreed upon.

A chain store broker must realize, at an early stage in his career, that he principally must represent either the property owners in his town or the chain store concerns from out of town who seek to locate there. The broker must know property values, how to estimate building and maintenance costs, and must have a wide knowledge of merchandising practices and costs.

Applicable Businesses

There are, broadly speaking, three general lines of business to which percentage leases successfully apply:

1. Retail stores catering to women and their needs.
2. Stores selling men's goods.
3. General stores, catering to both, but not requiring the high-powered locations of the first two classes.

Women's stores will line up entirely on one side of a street, while men's stores will be found on the other. General stores will be spotted on each side and at secondary locations. Percentage leases are seldom logically applied to districts that are not in the 80-per-cent to 100-per-cent "hot spot" class.

Other Common Provisions

Simply drawn percentage leases are preferred to involved and long-drawn-out documents such as some lawyers like to prepare. Stipulations that both lessor and lessee are to be bound by can be simply stated, without wordy repetitions and possible contradictions that become ambiguous when efforts are made to enforce them. Of course, the other extreme is encountered when the lease is so skeletonized that important covenants are left out.

Provision is made in many leases that in the event the tenant becomes bankrupt the leased property shall revert to the landlord and that the rent for the remainder of the leased term shall become due and payable.

It is customary to provide that the lessee shall agree to deliver peaceful possession of the premises at the end of the leased term and that, as a penalty for holding over, the rent shall be three times the amount originally provided for without the lessor waiving any right as to evicting the tenant and repossessing himself of his property.

In leases made to chain store companies operating many units in different cities throughout the country, it sometimes happens that the manager of a branch, or some employee, may unintentionally violate a covenant of a lease or a rent check may be lost or go astray. To provide for such a contingency, chain store executives usually insist upon notice of any breach being sent to their headquarters. The following clause covers it:

> It is understood and agreed that the lessor shall not take advantage of any breach of any covenant until ten days from the receipt of notice by registered mail directed to the lessee at its principal office, No. . . . . Broadway, New York City, or such other place as the lessee may designate, during which period of ten days said lessee shall have the right to pay any arrearage of rent or rectify any breach of covenant.

Each state has its own law about recording leases. In some it is mandatory to record in three, five, or seven years. In others it is not necessary to record. The law should be looked up on this matter in each state where a lease is being drawn.

If the lessor agrees, the lessee may sublease premises, but he cannot convey more than the privileges enjoyed under the master lease. A sublease must never be made for the full term of the original lease, as this constitutes an assignment; but it may be safely made for one day less than the term set forth in the original lease. In subleasing, the original lessee is not relieved of any responsibility or obligation to the lessor.

If the lease calls for the lessee to pay taxes and he fails to do so, the lessor, according to a provision that should be inserted in the lease, shall have the right to pay them and collect them from the lessee as additional rent. Date of payment of taxes should be specified, and the receipts or copies of them should be sent to the lessor. Where the lessee pays all expenses, such as taxes, insurance, and so on, it should always be provided that these amounts shall be paid *as additional rent* so that all payments may be enforced in the same manner as rent.

Another covenant usually included provides that, should it become necessary for the lessor to enforce by law any covenant of the lease that has been violated, the lessee agrees to pay the expenses so incurred, including reasonable attorney's fees.

Every lease should have a termination clause, the leased term being for a specified number of years or months. Possession should not be granted from term to term or year to year, requiring certain notice to be given by either the tenant or the landlord. Neglect to give such notice on a specified date often leads to difficulties that can only be settled in a court of law.

Future of the Percentage Lease

There will be a tremendous expansion in the use of percentage leases in the coming years, because there will be a vast growth in the number and kind of chain stores of all types. Only the larger cities have been the scene of extensive chain store activities thus far. Expansion to smaller cities and towns will be witnessed on a large scale by many new chains, which will gradually grow and widen their operations.

MAKE YOUR OFFICE BUILDING BASEMENTS PAY!

By *Stanley W. Arnheim, CPM*

With today's increased expenses it is important to make every foot of space produce revenue. This idea brought "plus" earnings from one building.

WOULD you swap a barrel of old rags for a barrel of gold? We did. Maybe you can, too.

We recently sold the seven story Heeren Building, a loft building located on Pittsburgh's Penn Avenue, in the heart of one of the two wholesale districts and also just a short distance from a good retail and office building section. Upon consummation of the sale, we were appointed rental agents for the property.

In our original inspection of the property, we noticed that a large portion of the basement was being used for storage of rubbish, paints, old lumber, discarded light fixtures and odds and ends belonging both to the building and to some of the tenants. A small portion had been partitioned off with chicken wiring and was being leased to a contractor for storage at $25.00 per month on a temporary basis.

Shortly after acquisition of the building, we decided an area of this size (about 2400 sq. ft.) was too large to be used advantageously just for rubbish. The superintendent's quarters, which were in the basement, were adequate, so that was not an angle. His workshop was equally adequate. The tenants were not the type who needed any appreciable amount of storage space.

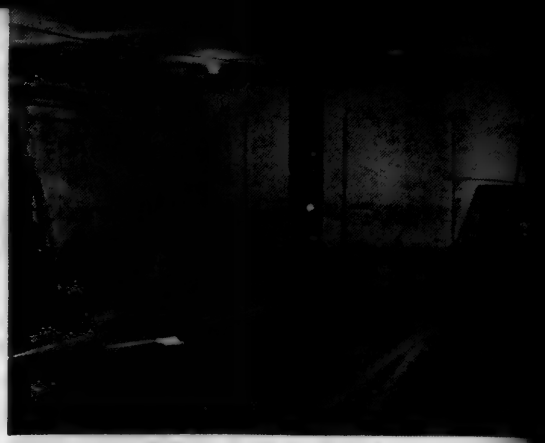
Since it was now partially rented for storage, we began to think along the lines of partitioning it off into large areas and making it available to other tenants in the neighborhood for warehousing purposes. The presence of a large freight elevator running to the basement and good loading facilities from the street made this seem a good bet. By reserving enough space to get to the steam lines and sidewalk electric vaults and renting the balance at 50¢ a square foot, this would produce additional income of $65.00 a month. Not bad! We contacted potential users of this space by personal solicitation and advertising; and as a result, we leased one small portion to Fanny Farmer on a month-to-month basis.

About this time we approached the big rental season which starts in Pittsburgh after January first and runs through April. Inquiries for all sorts of space came into the office and the shortage all over town was so bad that we were reluctantly turning away inquiries by the hundreds.

It was at this point it dawned upon us that maybe we could do better if this basement area could be converted into loft space. Loft space upstairs was bringing $1.25, maybe it could bring the same downstairs. We tried it and got a few nibbles.

STANLEY W. ARNHEIM *of Pittsburgh, Pennsylvania entered the real estate business in 1937 as a salesman and later purchased the firm which employed him, changing its name to Stanley W. Arnheim, Inc. He is a member of the Governing Council of the Institute of Real Estate Management and has served as president of its local chapter in Pittsburgh.*

Heeren Building
Penn Avenue at Eighth Street,
Pittsburgh, Pennsylvania

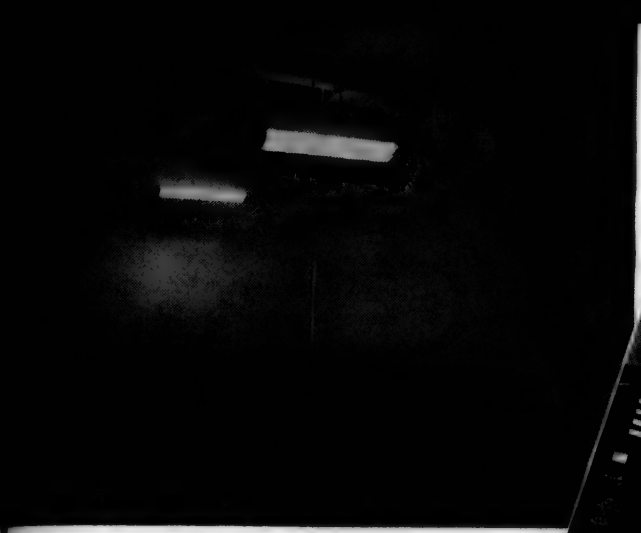


Basement space before work was started

Basement space after work got under way

First office completed except for asphalt tile floor

Corridor before work was started



Another view of first office completed except for asphalt tile floor

Second office 100 per cent complete

Second office 100 per cent complete

Same corridor 100 per cent complete

It was a difficult proposition, as most prospects could see only a dark, dingy basement, no natural light, a bad approach down a particularly unattractive corridor and questionable ventilation. They turned thumbs down. We began to despair of our second brain child. Then we submitted it to a men's hosiery and underwear sales agency who saw the possibilities of a conveniently located combination sales room and offices if we would really doll it up. Would we? We would!

We layed out the space they needed, about 550 square feet. We agreed to paint the corridor walls and paint the concrete floor, to hang flourescent light fixtures in their room, furnish freight and passenger elevator service to the basement (we were already doing it upstairs) and provide electricity and heat. We agreed on a rental of $90.00 or $2.00 per square foot.

Our superintendent was one of those all-around fellows who can blend carpentry, painting, plastering, plumbing and electrical work all into one job. He said he could do the work with one regular assistant. We ordered the materials and he went to work. The partitions were rock lath over two-by-fours, sealed joints and painted. The ventilation we solved with louvers opening into the corridor which in turn had sidewalk windows opening into it. It was perfect. The job was finished in about three weeks. Except for the superintendent and his assistant, the only help we used was to contract the electrical work. We totaled the bills—the job cost $360.00. The tenant was delighted with the space and we were delighted with the income.

We still had 1,000 sq. ft. left. Now, however, we had an easier selling job. At least a prospect could see what we could do. We felt confident the rest of the space would go quickly.

Shortly thereafter we got an inquiry for office space from the union representing the local electric light company workers. They had just terminated a city-wide strike that had forced all the office buildings in town to run on emergency set-ups with almost no lights, heated by temporary boilers set-up in the street outside the buildings and with abbreviated elevator service. These boys were as popular as a bee in a nudist colony. They were finding it even tougher than usual locating office space.

We took them down to see our "baby." They looked at it, saw its possibilities and negotiations began. I don't know anything about the labor-management negotiations at the utility company, but ours were short, sweet and to the point. They told us what they wanted. We figured the cost and set a rental of $250.00 or $3.00 per foot, including heat and light but no janitor service. It was a deal. The lease was signed and four months' rent paid in advance. At the tenant's request, we made the term two years.

At this point, we felt so good we went overboard. We covered the corridor walls with plasterboard, firred down the ceiling and installed fluorescent lights in the corridor, laid an asphalt tile floor over the entire basement, installed plumbing and really set out to make this into first class space.

We used the same two men to do the work. We contracted the floor, the plumbing and the electrical work. Everything else was "on the house." In about a month, we finished the job—lock, stock and barrel. The total cost: $3,105.

So from a useless basement rubbish room, we made a glistening little palace. The tenants are absolutely satisfied in every respect. We laid out a total of $3,465. Our rent increased $4,080 a year. I leave it to you as to whether or not we made a good deal. Moral: Look around your basement. Maybe you have more rentable area in your building than you think!

INCREASING EXPENSES OF APARTMENT BUILDINGS

By Leonard H. Scane

Most property managers are familiar with the skyrocketing costs of operating apartment buildings. The following study by a manager in one of Chicago's largest firms is a careful documentary of trends operating against apartment buildings in 1948.

WHILE income from rents in private residential housing has been held at a level approximately only six per cent over rent freeze date, expenses have risen about eight times more rapidly.

Frequently in the past, the level of expenses has been determined by totaling the various annual classifications of actual expense from a group of buildings. Such procedure gives no consideration to the tendency of ownership during a period of rising expenses, to defer considerable maintenance expense to a later date, and to under-insure properties. Also such computations do not reflect the full impact of rising operating expenses until one year or longer after date of the increase.

When determining an increase in the cost of living index, no government department examines paid rent receipts and paid grocery, clothing, and medical bills from millions of homemakers, a year or longer after rates for such items have risen. It has been assumed that when the cost of a quart of milk increases one cent in the Chicago retail market, the cost of living in Chicago has risen immediately in proper proportion. The public relations division of a national union would not wait a year or over before claiming a cost of living increase, due to a 15 per cent increase in the level of residential rents.

The Author's Formula

The author has proposed the use of a formula which shows the level of operating expenses for private rental housing, based upon current rates of expense for each classification of operating expense.

The current rates used in the analysis following, are those established in Chicago under present union agreements, by departments of the City of Chicago and County of Cook, and by local markets. The formula with corrections for type of apartment building under consideration and for rates of operating expenses in other communities, can be used in any part of the country.

Cost Comparisons

The following study of increased expenses was submitted in Washington, D.C. on January 16, 1948, before the joint Congressional Housing Committee and on

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LEONARD H. SCANE *has been with Baird & Warner, Inc. of Chicago for fifteen years as building manager and director of purchases. He has been in the general real estate business, specializing in property management for twenty-five years.*

MR. SCANE *is president of the Digest Club of Chicago, a professional organization composed of twenty office building managers, past president of Lambda Alpha, a national honorary land economics society, treasurer of the Apartment Building Owners and Managers Association of Chicago, and a lecturer on real estate at Roosevelt College of Chicago.*

January 30, 1948, before the rent control sub-committee of the Senate Banking and Currency Committee:

Residential rents in Chicago were frozen on July 1, 1942, as of March 1 of that year under the Emergency Price Control Act of 1942 by the Congress of the United States. In July, 1942, this law rolled back rents to those in effect on the previous March 1st. Since it is the custom in the Chicago area to rent residential units under an annual lease, March 1, 1942, freeze date rents, were those called for under the then existing leases entered into as of May 1st and October 1st, 1941. Frozen maximum rents reflect a level established in the free and competitive market of 1941. Since the freeze date of rents at the above level, the only opportunity for property owners to raise the rent level, with the exception of isolated hardship cases, has been under the Housing and Rent Act of 1947, whereby owners could secure a 15% increase above the 1941 level, but then only with tenants' consent and upon granting a lease at least to December 31, 1948.

The Office of the Housing Expediter has announced in the press that approximately one-third of Chicago housing units have been affected by, and re-registered under the mutual owner and tenant 15% increase agreement. In other words, at least two-thirds of Chicago residential housing has had no increase in rent level since 1941 rent freeze.

During this period, however, operating expenses of residential property have risen considerably. The increased expenses apply quite similarly to all types of residential property, including multi-story fireproofs, typical three story walk-ups, two flats and single family residential.

Increased costs of operating have been studied by comparing 1941 expenses to current expenses as of November 1, 1947. The following table shows percentages of increase based upon increased rates for each item of expense to owners of three-story walk-ups:

ASH REMOVAL — 32.3%

Two different 15% increases in rate to quantity buyers, as to management agencies; approximately 100% increase to buildings operated by individuals.

ELECTRICITY — 0.0%

No increase in rate.

EXTERMINATING — 30.0%

Twenty-five to thirty-five percent increase to management agencies; 100% increase to buildings operated by individuals.

FUEL

CHICAGO COAL MARKET PRICE PER TON

Pocohontas Mine Run — 58.7%

January to July 1941 - $8.85—July to December 1941 - $9.40 (less 25¢ per ton for cash)
November 1, 1947 - $14.30 plus 4¢ Federal Tax or $14.34 (less 25¢ per ton for cash)

Stoker Coal (Eastern Kentucky 1½" screenings) — 72.4%

January to July 1941 - $7.15—July to December 1941 - $8.10 (less 15¢ per ton for cash)

November 1, 1947 - $13.00 plus 4¢ Federal Tax or $13.04 (less 15¢ per ton for cash)

Extra delivery costs (charges per ton) — 60.0%

Trimming, 1941 at $.25 to $.40 in 1947
Wheeling, 1941 at $.60 to $.95 in 1947

CHICAGO OIL MARKET PRICES PER GALLON

Fuel Oil No. 5 — 76.2%

In lots of over 800 gallons per delivery on September 2, 1941 - $0.0525 plus 2% tax; raised to $0.0925 plus 2% tax in lots between 750 to 1499 gallons as of November 1, 1947 or from $0.05355 to $0.09435.

Fuel Oil No. 3 — 71.4%

In lots of over 400 gallons per delivery on September 2, 1941 - $0.0675 plus 2% tax, and on September 15, 1941 - $0.070 plus 2% tax raised to $.120 plus 2% tax in same lots as of November 1, 1947 or from $.0714 to $.1224.

MANAGEMENT — 20.0%

Combined rate for management and leasing raised from 5% of income to 6%.

MAINTENANCE & REPAIRS — 69.0%

Includes both labor and material for carpentry, decorating, electrical, heating, plumbing, roofing, sheet metal, and tuckpointing repairs. An authoritative Chicago Government Agency estimates an 80% increase in actual construction costs today over 1941 and has set at 69% their "stabilized" increase in such costs. Rate of increases by contractors for smaller repair work is greater than rate increase in larger jobs of new construction.

PAYROLL - JANITOR — 32.3%

According to Chicago Flat Janitor's Union Agreement, one 15% increase in

wage scale in 1943 and another 15% increase in 1946. These rates of increase apply in all cases and do not reflect other additional increases received by janitors in those buildings where 15% rent increases have automatically also raised janitor wages.

REPLACEMENTS

GAS RANGES 78.7%

Four burner standard apartment house model table top gas range—price in 1941 - $45.45 plus 2% or $46.36, now raised to $74.00 plus 10% plus 2% tax, or $82.88.

REFRIGERATION 58.7%

6 cubic foot standard apartment or stripped model of electrical refrigeration price in 1941 - $98.84 plus 2% or $100.82, now raised to $160.00 net, which includes 20% excise tax and 2% state occupational tax.

Above prices are those offered management agencies or other large purchasers of stoves and refrigerators. No consideration has been given for increased costs of replacements in the table below, since average Chicago apartment building owners under rent control have had little or no income available for replacements.

SUPPLIES 21.0%

From study by cost engineers in analyzing increased costs of 100 various items of supply used in buildings.

WATER 8.2%

City of Chicago water rate—discount for prompt payment reduced in 1942 from 15% to 8%—changing effective rate for 1000 cubic feet from $.51 to $.552.

INSURANCE

FIRE 43.2%

Increase caused by increased reproduction costs. Insurance engineers use an index of 1.988 for 1947 compared to 1.243 for 1941—an increase of .7450 over 1.243 or 60%, which when considering additional depreciation for 6 years and 80% coverage factor, amount of coverage to avoid co-insurance feature, averages 43.2%.

WORKMEN'S COMPENSATION INSURANCE 8.8%

Increase in minimum rate from $34.00 to $37.00.

OWNERS' LANDLORD AND TENANT LIABILITY 23.2%

Caused by increase in insurance rate, and also takes into consideration increased statutory death benefit in State of Illinois raised to$15,000.00 from $10,000.00.

TAXES

REAL ESTATE 24.1%

Rate

Rate for 1940 (Paid in 1941) $9.52 per 100 of 37% of assessor's valuation. Rate for 1946 (Paid in 1947) $2.75 per 100 of 159% of assessor's valuation. Based on 100% of assessor's valuation, the effective tax rate in 1940 was $3.5224 per $100 compared to $4.3725 per $100 in 1946.

Assessed Valuation ?

Office of the assessor has stated in the press that the possible 15% increase in rent level under the Housing and Rent Act of 1947 (even though increases were secured only in one-third of Chicago's private housing) will contribute toward raising the income factor which will be used in increasing assessed valuations established for the next quadrennial.

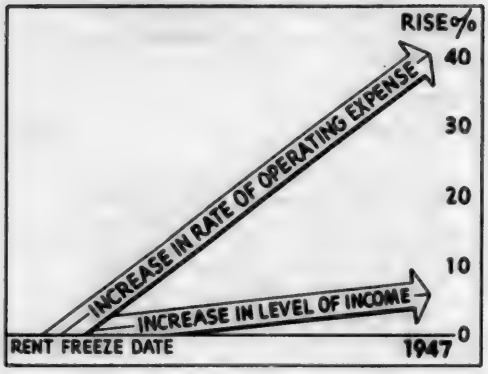
SOCIAL SECURITY TAXES 32.3%

Same increase as wages.

It is necessary to weigh the above percentage increases in rates by using a ratio of each classification to total operating expense, in order to show total percentage increase on November 1, 1947, over operating expenses in 1941. Expenses for the calendar year 1946 in a large group of three story walk-up apartment buildings, under Baird & Warner management, selected from various parts of Chicago and several suburbs, were consolidated to determine the percentage of each expense classification to total operating expense. Where increases in rate of operating expense as described above vary, the lower percentage increase has been used. Percentage increase of each expense classification to total operating expense reflected by increases in rates of expense since 1941 are shown in the table on the following page.

The above substantiates a general increase in operating expense in Chicago of walk-up apartment buildings as of November 1, 1947, over 1941 of at least 40.4%, and takes into consideration no factor for increased real estate taxes due to possible raise in assessed valuations and for other threatened operating increases. During this period approximately 1/3 of the units have received no more than the maximum 15% increase over the rent

RATES OF OPERATING EXPENSES FOR CHICAGO THREE STORY RENTAL HOUSING—NOVEMBER 1, 1947 COMPARED TO RENT FREEZE YEAR.



freeze level, while approximately 2/3 of the units have received no increase in 1941 rent levels.

Some labor and government agency leaders have stated that apartment building owners' income has greatly increased during rent control from increased occupancy, not withstanding the fact that rent control was applied for the purpose of protecting demand at an acknowledged period of supply shortage. The United States Government, Department of Commerce, Bureau of Census actual statistics as of 1940 show that in the city of Chicago vacancy held for both sale and rent was 3.8%, and vacancy in Chicago Metropolitan area was 3.4%. By early in 1942, the rent freeze year, a sampling by a Chicago research organization shows the vacancy declined to only 1%, while statistics of a Chicago utility made in January of the same year shows a vacancy of .9%.

With the rate of operating expenses of three story apartment buildings in Chicago up at least 40.4% as of November 1, 1947 over rent freeze date, and with present operating expense, before reserves for replacements, vacancies, credit loss and for depreciation, taking approximately 53% of dollar income, it is necessary for present rent income to be increased 21.412% in order to cover only additional expenses and to continue 1941 standard of operating. If rent income has risen .9% over rent freeze date because of increased occupancy, plus 5% in rent level because of mutual landlord and tenant 15% rent increase agreements, gross income is up during the same period by approximately 5.945%, leaving an additional increase of 15.467% necessary to provide the dollar return received as of rent freeze.

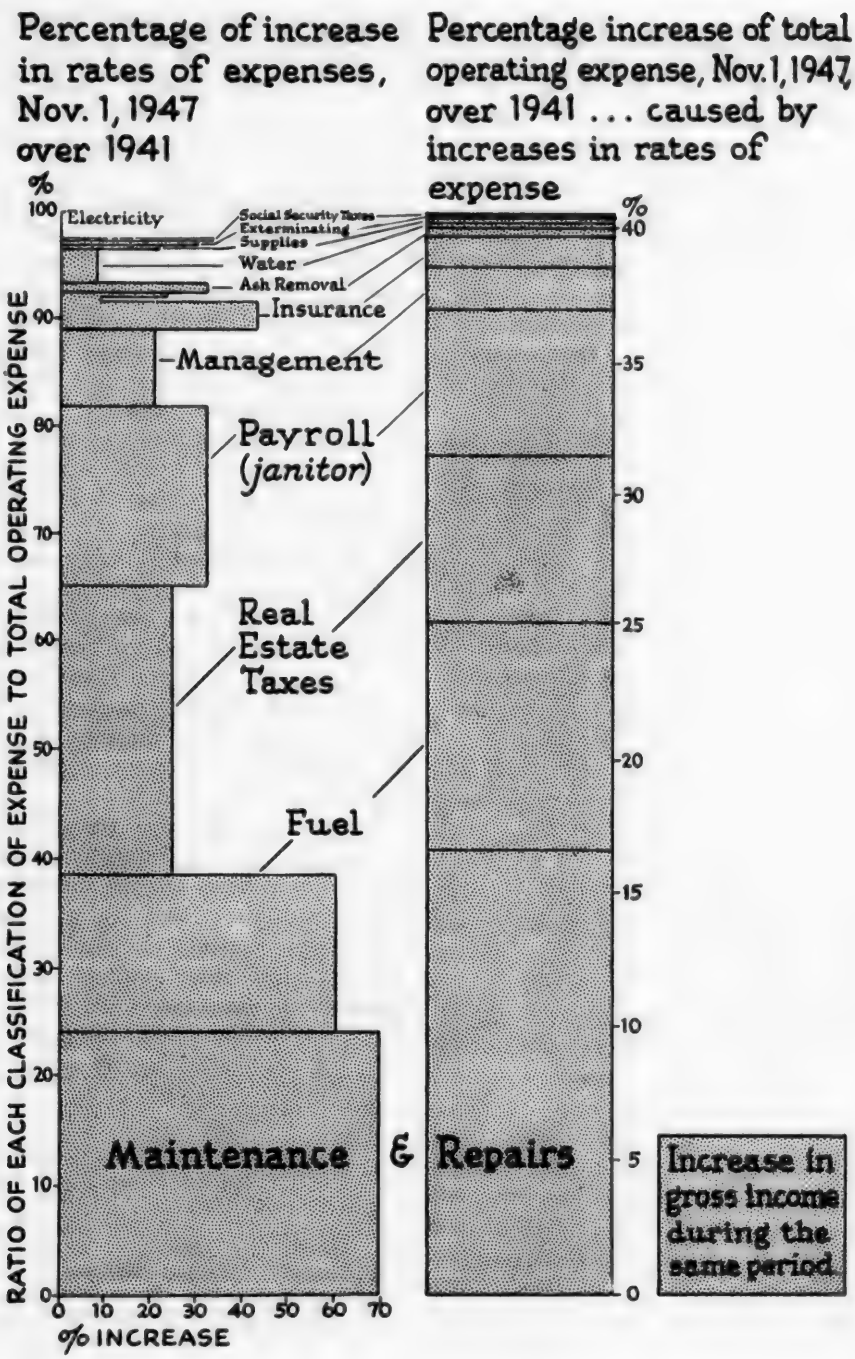
This, of course, would be paying capital or landlords only 1942 wages in 1947 depreciated dollars. The cost of living to landlords has risen the same as to labor, farmers, retailers, etc. who are pricing services and products in dollars of today which are at least 100% by number in excess of those of 1941.

There have not been sufficient dollars from rental income to cover above described increases in rates of expense and conserve properties against undue depreciation without giving any consideration to a fair rate of profit. As a result, buildings are underinsured, maintenance and repairs are deferred, and part of current operating expenses are paid from depreciation reserves which is from capital, or taken from outside investments. An inspection of Chicago privately owned rental properties will show deteriorated standards of maintenance due to a starved income.

A continuation by goverment of a policy which limits income and has at the same time permitted increased costs of operation with pending threats of further increases, for the private rental housing industry is Un-American, is in effect confiscation, and has already begun the movement of a flight of private investment capital from rental housing. Federal Judge John P. Barnes has been quoted by the Chicago press as stating on November 24, 1947, "Landlords have been grossly abused—the price of everything other than housing has risen by large percentages, but rentals for residence property are being kept static. That is confiscation—I don't know what I can do for the landlords; but the housing expediter could do something, and he should—not only for the landlords, but for the community, in order to encourage building."

ANALYSIS OF INCREASING EXPENSES

Classification of expense	Percentage of increase in rates of expenses, Nov. 1, 1947 over 1941	Ratio of each classification of expense to total operating expense	Percentage increase of total operating expense Nov. 1, 1947 over 1941—caused by increases in rates of expense
Maintenance & Repairs	69.0%	24.08%	16.6152%
Fuel	60.0	14.41	8.6460
Real Estate Taxes	24.1	26.60	6.4106
Payroll (Janitor)	32.3	16.65	5.3780
Management	20.0	7.19	1.4380
Insurance			
Fire	43.2	2.48	1.0714
Workmen's Compensation	8.8	0.18	0.0158
Owner's, Landlord & Tenant Liability	23.2	0.49	0.1137
Ash Removal	32.3	0.92	0.2972
Water	8.2	2.99	0.2452
Supplies	21.0	0.54	0.1134
Exterminating	30.0	0.29	0.0870
Social Security Taxes	32.3	0.17	0.0549
Electricity	0.0	2.44	0.0
		99.43% of expense	40.4864% increase over 1941


Percentage of increase in rates of expenses, Nov. 1, 1947 over 1941
Percentage increase of total operating expense, Nov. 1, 1947 over 1941 . . . caused by increases in rates of expense
%
Electricity
Social Security Taxes
Exterminating
Supplies
Water
Ash Removal
Insurance
Management
Payroll (janitor)
Real Estate Taxes
Fuel
Maintenance & Repairs
Increase in gross income during the same period
RATIO OF EACH CLASSIFICATION OF EXPENSE TO TOTAL OPERATING EXPENSE
100
90
80
70
60
50
40
30
20
10
0
40
35
30
25
20
15
10
5
0
0 10 20 30 40 50 60 70
% INCREASE

1948

Expenses Still Going Up

Since preparation of the above report, apartment building operating expenses continue to rise far above the 40.4 plus per cent, while income continues frozen through political maneuver.

Both ash removal and exterminating are up 100 per cent over rent freeze date to owners without agency management instead of 32.3 and 30 per cent respectively, the percentages used in the report. On January 5, the Interstate Commerce Commission granted railroads an additional 10¢ per ton increase in freight rates, which was immediately passed on to Chicago coal users, and again on March 22, 50¢ per ton more was added to the price. On the tenth of May, 10¢ per ton, and again on June 14, another 25¢ per ton was added to the price. By agreement the miners are about to receive 40¢ instead of 10¢ in their welfare fund from each ton of coal mined. Before summer is over, it is estimated that the retail price of coal may increase by $1.30.

Fuel oil increased on December 12, January 6, January 9, and January 12, or an increase of 113.7 per cent for No. 5 and 110.0 per cent for No. 3 over rent freeze date, instead of 76.2 per cent and the 71.4 per cent respectively used in the report.

Wages continue to rise since the estimate of 69 per cent, used for the increase in rate of maintenance and repairs. In March electrician wages rose 20¢ per hour to $2.35 per hour and plumbers and steamfitters rose the same amount to $2.40. On June 1 bricklayers', plasterers', cement workers', and carpenter wages went up 20¢ per hour, while decorators expect a similar increase in August.

Only minimum increases for flat janitors' wages are shown in the report and do not include automatic wage increases received when the .9 per cent vacancy of rent freeze date became occupied, or wage increases received in many buildings by janitors due to the mutual landlord-tenant 15 per cent increase agreements.

The rate of increased expense is much greater in fireproof buildings and in residential hotels where there is a larger percentage of total expense falling in wage classification, because of more service offered tenants.

The City of Chicago has raised its boiler inspection fee 66⅔ per cent and its building inspection fee approximately 10 per cent for 1948, while City politicians secure favor of voters by attempting to freeze income of property owners through City rent control.

A complete study of all types of Chicago private apartment building properties, including fireproofs, walk-ups, and residential hotels, both those enjoying economics of agency management and those individually managed, indicates a current level of expense which is in excess of 50 per cent above similar expense on rent freeze date.

THE "GILBERT FORMULA"

By *F. L. Gilbert*

A new approach to an often neglected subject – analyzing your cleaning costs – is offered in the Gilbert formula. Based on careful appraisal of cleaning tasks, a successful building manager concludes that the generally accepted method of making work assignments for cleaning can be vastly improved with resulting economies. Here's an aid to cutting down operating expenses.

FOR THE past decade little attention, intelligent thought and research has been given to one of the most important elements of operating expense in a building—cleaning.

This can, to a more or less extent, be justified due to conditions prevailing during the war years—conditions which saw us struggling to operate our buildings with depleted force. But now that the war is over and more help is available, it behooves all of us to give this subject its due attention.

I speak from experience. A survey of cleaning costs in one building for 1946 and comparison with other years, made it plain that something had to be done if at all possible to offset the rising costs of operation —particularly in cleaning which represents almost 33 1/3 per cent of our total A & B operating expense. It was apparent that the system which we had followed in the past of having janitors or porters work down thru the building cleaning lighting fixtures, venetian blinds, vacuum cleaning carpets, polishing partitions, etc., paying no special attention to the exact amount of work covered, was not satisfactory in this day and age when employees seemed to be interested in the amount of pay and not the amount of work rendered for that pay.

I therefore decided to try and do something about it. I decided a definite set of schedules or routines was necessary for each employee covering the various operations performed by janitors or porters.

Analysis is Necessary

In order properly to lay out this work and set up these schedules I had to know the number or quantity of the various services to be rendered in each individual office. So we detailed an intelligent janitor to count the number of lighting fixtures, number of square feet of linoleum, carpet, number of lineal feet of movable partitions, etc. in each individual suite of offices. While we were making this count we had tests run to determine the length of time necessary to perform various services, and from these tests and the count various schedules were set up.

For example, in the case of the janitor who operated the large portable power vacuum cleaner and who went from floor to floor cleaning carpets and rugs, we found after we had our detailed count of the number of square feet of carpet and rugs in each office that he had been cleaning approximately 4000 square feet of carpet per night of seven hours. We placed a supervisor

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F. L. GILBERT *is manager of the Lincoln Liberty building, one of Philadelphia's principal office buildings. He is associated with the Jackson-Cross Company, the firm of NAREB's Past President, Boyd T. Barnard. Mr. Gilbert had his "proving ground" close at hand, since the Jackson-Cross Company is located in the Lincoln Liberty Building. His new approach to the cleaning problem has created great interest among building managers who have heard about it.*

GILBERT FORMULA

FOR DETERMINING THE CLEANING ASSIGNMENT IN ANY GIVEN BUILDING

THE APPLICATION OF THIS FORMULA WILL REFLECT BY MEANS OF WORK UNITS AN EQUITABLE DISTRIBUTION OF AREA TO BE CLEANED

STEP NO. 1 You will list on Columnar Form (see sample) room no. of each suite - together with square feet of net Rentable Area. Next secure the no. of sq. ft. of Carpet - Rugs - Linoleum - Concrete or other floor covering in each office and list these amounts in proper column. Next count the no. of Desks - Chairs - Tables - Files - Lamps - Couches - Book Cases - Clothes Trees - Wash Basins - Safes - Cabinets - Shelves in each office and list amounts in proper columns.

SAMPLE FORM

RENTAL AREA		SQ. FT. FLOOR COVERING				FURNITURE AND OTHER EQUIPMENT												TOTAL FURN. UNITS	FURN. WORK UNITS	FLOOR WORK UNITS	SPACE ADJUST UNITS	TOTAL WORK UNITS
ROOM NO.	NET SQ.FT.	CARPET	RUGS	LINOL*	CONCR.	DESK	CHAIR	TABLE	FILE	LAMP	COUCH	BOOK CASE	CLOTHES TREE	WASH BASIN	SAFE	CABINET	SHELF	MISC.				
1436-60	1370	1200	—	—	170	7	34	11	7	1	—	2	—	—	1	—	10	—	73	80	197		277
1438	507	—	384	—	143	4	13	5	5	2	—	—	1	1	—	—	6	—	37	41	69		110

STEP NO. 2 Divide total No. of Sq. Ft. of net rentable area in building by your established base No. of Sq. Ft. per Hour allotted to each cleaner. This gives you the No. of Hours work necessary per night - divide that figure by the No. of Hours each cleaner works per night. This will give you the No. of cleaners necessary under the Sq. Ft. Allotment System.

STEP NO. 3 Total each column of above form for entire building. Then divide each result by the No. of cleaners shown in Step No. 2. This gives you the Ave. No. of Sq. Ft. of floor covering and the Ave. No. of furniture and equipment units each cleaner should have under the Sq. Ft. Allotment System.

STEP NO. 4 Allot 1-1/2 work units for each ten (10) sq. ft. of Carpet & Rugs shown -- Allot one (1) work unit for each ten (10) sq. ft. of Linoleum or other Floor Covering, including Concrete. Allot two (2) work units for each desk -- Allot one (1) work unit for each piece of Furniture and Equipment shown. (Note) One work unit to be allotted for each bay of sectional Book Cases and one work unit for each bay of shelving. This will give you the total No. of work units in each of the above columns and also a basis for completing the totals in the last five columns of the form. Now transfer detailed information for each office to individual cleaners schedule card (sample below) and the totals will show the No. of work units each cleaner has under your Sq. Ft. Allotment System. This will show you the inequality in your present system.

EXHIBIT I

INDIVIDUAL CLEANERS SCHEDULE

CLEANER - MARY HUSOCK — SCHEDULE NO. 3

Room No.	AREA	CARPET	RUGS	L-C	DESK	CHAIR	TABLE	FILE	LAMP	COUCH	BOOK CASE	CLOTH TREE	WASH BASIN	SAFE	CAB	SHELF	MISC.	ADJ. UNITS	TOTAL FURN. UNITS	TOTAL WORK UNITS
SOUTH 200 7th FL.	7000		718	7000	73	206	27	11	—	—	1	20	—	—	—	—			338	1219
TOT. WORK UNITS			108	700	146	206	27	11	—	—	1	20	—	—	—	—	—	—		1219
AVE. WORK UNITS		210	190	392	104	130	39	55	15	2	12	13	6	3	4	24	—	—		1200

STEP NO. 5 Results as shown by Steps 1 to 4 will give you the total no. of work units in the bldg. for each column. You can now determine from these results the base no. of work units each cleaner should be allotted and then rearrange the schedules using WORK UNITS as a base instead of sq. ft.

NOTE Experience has shown that a woman cleaner should do approximately 200 work units per hour or 1200 work units per six (6) hour night. However, each building can adjust the hourly base up or down where unusual conditions seem to warrant such a change. The hourly allotment given is based on a cleaner doing no scrubbing - no wall washing - no cleaning of venetian blinds - wood and glass partitions - electric light fixtures and no polishing of doors - jam or trim. If cleaners have toilet rooms or other special space to clean proper work units should be assigned in column marked MISC. If space is of very unusual character and exceptionally hard to clean - additional work units may be allotted in space adjustment column.

Formula compiled by F. L. Gilbert of Jackson-Cross Company, Realtors - Manager Lincoln-Liberty Bldg., Philadelphia, Pa. 8-1-47

with him for several nights to show him a few short-cuts and more efficient methods of operation and found he could do 6000 square feet of carpet and do it comfortably and efficiently without having to extend himself.

A complete schedule of offices similar to that given a woman cleaner was therefore set up for him to cover nightly—using 6000 square feet as a base—and this schedule is followed in detail and a report so made on a night report sheet.

This same system of schedules was put into effect for all the various services rendered by janitors. While the unit amounts naturally will vary from building to building, depending on character and use, what we found was of interest, and might be used as a check against any building. Here is what we turned up:

Vacuum cleaning carpet or rugs with large power vacuum cleaner—no desks moved .....850 sq. ft. per hour
Scrub off old wax, rewax linoleum, rubber or asphalt tile flooring, no buffing, no desks moved.....300-400 sq. ft. per hour
Clean and polish with Parker polish interior metal doors, jam and trim—both sides .....35 minutes
Clean and polish with Parker polish corridor metal doors, jam and trim—inside only.....25 minutes
Clean chain type (interior reflector) lighting fixture .....10 minutes
Clean stem type (Kurt Versen or Twinlite).... 7 minutes
Clean standard ceiling bowl type..... 5 minutes
Dusting (only) with vacuum cleaner 1 venetian blind (25 sq. ft.).....15 minutes
Cleaning and polishing with Parker polish wood and glass partition ceiling high 8′ 6″.....30 ft. per hour
Clean and polish with Parker polish wood and glass partition - low - 7′ high...35 ft. per hour
Cleaning and polishing wood railing .....45 ft. per hour
Cleaning and polishing counters .....45 ft. per hour

Working Out The Formula

After these checks had been made, the night superintendent was instructed to have the janitor count all the furniture and equipment in each individual office and list it on a rough pencil form. We counted the number of desks, chairs, tables, files, lamps, couches, bookcases, clothes trees, wash basins, sofas, cabinets and shelves in each office. In short, we counted and listed every piece of major equipment that had to be cleaned.

After securing this mass of information, a natural question was: Why do we allot cleaning space to cleaners on the basis of the number of square feet to be cleaned? Was it because everybody has used this yardstick for as far back as I can remember, or has it become more or less a matter of habit, an easy way of allocating work? Of course it has always been considered by the building manager as a fair method of distribution. But is it a fair method of distribution? If it isn't a fair method then isn't some of the work suffering because of the unequal allotment? All of these were questions that came to my mind, and out of that thinking came an idea, which for lack of a better name I called the "Gilbert Formula."

Step number 1 of this formula requires that you list on a form the room number of each suite together with the square feet of net rentable area. (See Exhibit I) Next secure the number of square feet of carpet, rugs, linoleum, concrete or other floor covering in each office and list these accounts in the proper column. Next count the number of desks, chairs, tables, files, lamps, couches, bookcases, clothes trees, wash basins, sofas, cabinets and shelves in each office and list the amounts in proper column.

Lincoln-Liberty Bldg., Phila.

Chart Showing Sq. Ft. Area and Work Units Before and After Application of the Gilbert Formula

Space No.	Sq. Ft. Area Before	Sq. Ft. Area After	Work Units Before	Work Units After
1	7000	7000	1577	1577
2	7000	7000	1571	1571
3	5250	7000	887	1219
4	5250	7000	910	1221
5	6077	6761	1067	1160
6	5658	6511	1000	1153
7	5808	5406	1265	1197
8	5909	6500	1127	1177
9	5806	6875	1057	1177
10	6091	6008	1075	1159
11	5899	5682	1202	1150
12	5686	5686	1155	1155
13	6028	6028	1154	1154
14	6047	6350	1091	1174
15	5909	5706	1196	1157
16	5671	5933	944	1147
17	6013	6013	1158	1158
18	5549	6277	1036	1150
19	5983	5785	1145	1156
20	5786	5564	1194	1157
21	6064	5524	1265	1149
22	5887	6262	1116	1174
23	5986	5868	1168	1150
24	5674	5674	1192	1192
25	6005	6145	1106	1158
26	6075	7148	943	1119
27	6297	7257	1086	1165
28	5721	5618	988	1142
29	5901	6257	1065	1156
30	5859	6199	1155	1152
31	5792	5792	1159	1159
32	6042	6762	975	1095
33	6215	——	1190	——
34	5635	——	841	——

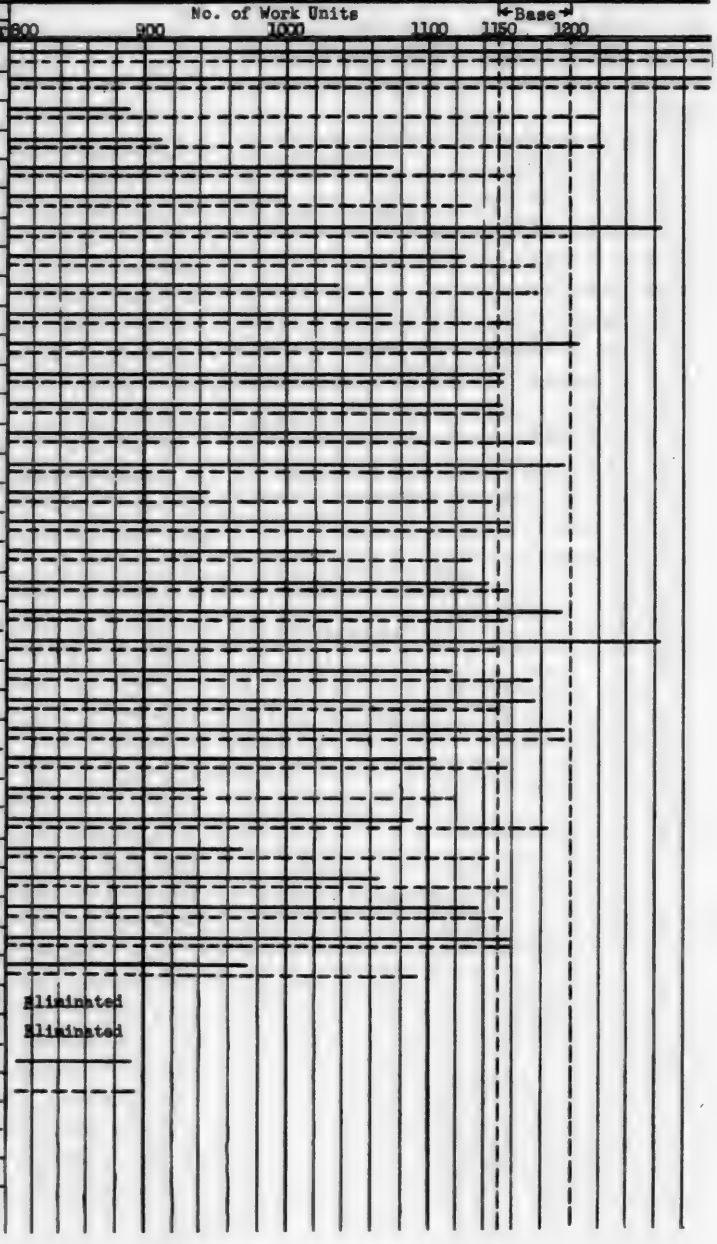


EXHIBIT II

This sounds terrific, but I assure you it isn't. Our building has 205,000 square feet of net rentable area, and this count was accomplished very quickly.

Step number 2 of the formula requires that you divide the total number of square feet of net rentable area to be cleaned in the building by your established base number of square feet per hour allotted to each cleaner. In our case we had always used 1000 square feet per hour as a yardstick and I believe that is the figure most commonly used. This figure will give you the number of hours of work necessary per night. Divide that figure by the number of hours each cleaner works per night which will give you the number of women cleaners you should have under the square foot allotment system.

Unit Count For A Building

Step number 3 requires that you total each column of the form for the entire building. This will give you the total number of square feet of various floor coverings, and the total number of pieces of each of the furniture and equipment items in the entire building. Now divide these totals by the number of women cleaners shown necessary by Step number 2 which will give you "par for the course" so to speak, or the average number of square feet of floor covering and the average number of units for each of the furniture and equipment items that each cleaner should have on her schedule under your square foot allotment system.

Step number 4 requires the allotting of work units for each item shown on the form. After some study we decided that offices with carpet or rugs were about one and one-half times as hard to clean as those with other types of floor covering. So we allotted one and one-half (1½) work units for each ten square feet of carpet or rugs shown and one (1) work unit for each ten square feet of the other type floor covering including bare concrete. We then gave some thought to the matter of furniture and equipment and realized that without extensive and minute time studies we could not grade each of these items accurately. However, we did feel that a desk with all its many objects thereon was twice as hard to clean as any other piece of equipment. So we allotted two (2) work units for each desk. We then allotted one (1) work unit for each of the other pieces of furniture and equipment shown on the Step number 1 form. You will note that we allowed one work unit for each bay of shelving (irrespective of width)—not each shelf. After you have completed allotting these work units to each office suite you have the information necessary to complete the figures in the last five columns of the form, that is, the number of furniture units, furniture work units, floor work units and the total number of work units.

A Better Assignment System

You now make up an individual cleaner's card similar to the one shown in Exhibit 1, and transfer to each card from the master chart all the information pertinent to each office shown on the cleaner's schedule. After these columns are totalled you will then have the total number of each item that goes to make up each woman's schedule and the total number of work units. This of course you can compare with the averages which you have secured in Step number 3, and which you see at the bottom of the individual cleaner's card.

In order to secure a more comprehensive overall picture of this situation, I prepared a chart. (See Exhibit II) You will note the absolutely inequitable distribution of work as shown by the solid lines, which show the number of work units each of our

cleaners had under the square foot allotment system.

You will see that one cleaner, Space number 7, had 5808 sq. ft. of space which showed 1265 work units, another Space number 27 with 6297 sq. ft. of space and only 1086 work units—almost 500 more square feet of space but 180 less work units. This cleaner has always thought she was worked to death and mistreated because she had 300 more square feet than average. I found Space number 32 with 6042 sq. ft. of area and only 973 work units and still another Space number 34 with 5695 sq. ft. of space and only 841 work units, and so on down the line.

Immediately I saw the light. I saw there was nothing fair or equitable to cleaners or to our owners in allotting space to be cleaned by the square foot method. It was very clear that you could have 250 square feet of space occupied by one desk, a couple of chairs and a bookcase, or you could have the same 250 square feet of space occupied by three desks, six chairs, a few files, and so on, and therefore far more difficult to clean.

I then said to myself, what is fair to both the employee and employer? I found in surveying this chart that approximately 50 per cent of my 34 office cleaners had been cleaning area in which there were between 1150 and 1200 or more work units. They had been cleaning these spaces regularly. Some of them for many years and doing the work efficiently. Therefore I could see no reason why all the women cleaners should not do space containing an equivalent number of work units; in other words, 1200 work units for our six hour night or 200 units per hour.

You are now ready to proceed with Step number 5 which simply means that you rearrange your schedules using work units as a base instead of square feet.

Of course each building can adjust the hourly base up or down where individual conditions seem to warrant such a change. I want to state that this hourly base was based on a cleaner doing no scrubbing or wet mopping, no wall washing, no cleaning of venetian blinds, wood or glass partitions, electric light fixtures, and no polishing of metal doors, jam and trim. These are things normally done by special crews.

If cleaners have toilet rooms or other special space to clean proper work units should be assigned in column marked "Misc." If space is of a very unusual character and exceptionally hard to clean, additional work units may be allotted in the space adjustment column.

I am sure this whole thing sounds very complicated, but it really is quite simple. Of course it requires a little work in setting up your figures, but after all what do we ever accomplish that is really worthwhile without work?

Testing The Plan

This system establishes a number of basic facts. First, and by no means unimportant, it provided as near as humanly possible an equitable distribution of the work. Second, it allowed me to reduce our cleaning staff from 34 to 32, and if I had wanted to hew closer to the 200 unit per hour, (and I am sorry now that I didn't) I could have eliminated another cleaner. I would strongly recommend that you use the 200 work units or more per hour as subsequent studies have shown that even that figure may be low.

We recently made some further tests, just to strengthen my case, if that were possible, or possibly weaken my case if the results turned out that way.

We arranged with the Night Superintendent to have several suites of offices cleaned by a strange cleaner on an overtime basis. This plan followed a series of definite steps.

1. We selected a cleaner whom we knew

was an efficient cleaner, not a fast cleaner. One whom we felt could keep her mouth shut and not discuss our plan with the rest of the force.

2. I then selected at random from my cleaners' work cards 12 suites of offices with approximately 200 work units. Just by accident I happened to select a well diversified type of tenancy, as you will see by the form No. 3. No. 1.—An industrial office. 2.—A lawyer. 3.—A trade Association. 4.—A railroad, and on down the line, each a different business except that there were two lawyers. We were fortunate in that these offices had different types of floor covering, as you will note on the form. (Exhibit III) No. 1—Linoleum. No. 2—Carpet. No. 5—Two thirds rugs, one third linoleum. No. 10—Rugs, etc. This gave us a good test of the amount of time necessary to do various types of floor coverings.

3. I then called in the woman cleaner we had selected and told her just what we were planning to do. I told her we were testing out the amount of time it would take to do the average suite in order to see if our formula was fair. I told her I did not want her to hustle. I wanted the work done just as she would do her own space.

4. We then selected one suite a night and told the regular woman cleaner who had that suite not to clean it, that the tenant did not want it cleaned that night. Then, after all the cleaners had left at the end of the day, the Night Superintendent and the especially selected woman cleaner went to this suite and she cleaned it.

5. We tried to simulate conditions as they normally exist by having the Superintendent stop the cleaner from time to time and hold conversations with her about other matters.

6. We timed each operation. 1st.—The time it took to empty ash trays and waste baskets. 2nd.—The time to clean the floors. 3rd.—The time to dust, and finally the time to clean wash basins, mirrors, fingerprints, etc.

Fair Work-Load Found

The results of these tests I then set down as shown on the form (Exhibit III) together with all pertinent information about each suite. I did this in order that I might have the complete picture for analysing purposes.

Then I totaled all the pertinent columns and averaged them. You will note that this cleaner averaged 275 work units per hour. You will also note that 13.2 per cent of her time was spent in emptying waste baskets, 40.8 per cent of her time on floors, 37.4 per cent of her time in dusting and 8.6 per cent of her time on other miscellaneous things.

You will note that I do not give the total nor the average number of square feet of net rentable area cleaned, for I am no longer interested in that unit of measurement. But, as it worked it out, the offices were cleaned on the basis of 1440 sq. ft. of net rentable area per hour, or 1260 sq. ft. per hour allowing for ¾ hour of non-productive time.

I felt this test was extremely fair for three reasons: The cleaner had been fully appraised of what she was doing, she knew she was being checked and was told not to hustle; she had already worked six hours on her own space and therefore was tired; she was a stranger to the space and therefore could not be expected to do it quite as fast as one who knew it well.

I realized, however, that no cleaner could be expected to do 275 work units every hour, because there would be certain lost time. So, you will see at the bottom of the form you have received, an analysis of non-productive time. I allowed 10 minutes for starting. I estimated each woman had approximately 5 suits of offices, so I allowed

EXHIBIT III

MARCH

No.	Type Tenant	Room No.	Area Sq.Ft.	Type Floor	Floor W.U.	Furn. W.U.	Total W.U.	Time to clean in min. Paper	Floor	Dust	Basin	Total	Waste Basket	Desk	Chair	Table	File	Lamp	Couch	Book Case	Cloth. Tree	Wash Basin	Safe	Cab	Shelf	Misc.
1	Industrial Office	1734	1296	Lin.	130	70	200	10	19	20	3	52	12	11	20	9	9			1	4	1	1		3	
2	Lawyer	1432	1036	Carp.	148	61	209	6	15	15	4	40	7	8	20	5	8	2		1	2	1	1		11	
3	Trade Assoc.	2118	982	Carp.	148	63	211	7	21	14	4	46	13	6	11	11	8			4	1	1	1		16	
4	Railroad	1114	1368	Lin.	137	83	220	9	22	18	3	52	10	15	28	3	9					1		3	9	
5	Advertising	812	1116	2/3 Rug 1/3 Lin.	143	80	223	9	16	17	3	45	5	5	22	12	16	3		2		1	7		7	
6	Insurance	2340	1082	Carp.	153	87	240	5	20	18	7	50	7	6	22	6	19			1		2			5	
7	Accountant	1700	1100	2/3 Rug 1/3 Lin.	158	76	234	5	22	25	3	55	8	11	23	5	11	7		3	1	1		2	3	
8	Steel Co. Office	1834	1400	Lin.	150	87	237	4	17	12	5	38	7	7	19	6	30	5	1	1		2	3	6		
9	Stock Broker	1540	1060	Carp.	158	61	219	7	17	21	6	51	8	11	29	11	2	2	1	3	4	2	1	3	1	
10	Lawyer	1804	1200	Rugs	170	81	251	7	22	20	4	53	6	5	23	8	18	3		1	2	1	1	1	13	
11	Silk Co.	1708	1124	Carp.	184	71	255	5	31	32	3	71	10	9	19	8	8	4	1	4	8	1	1	2	1	
12	Distiller	1616	1593	2/3 Carp. 1/3 Lin.	193	71	264	6	24	14	7	51	9	8	24	7	7	1		1	8	2		8	1	
				Total	1880	893	2773	80	246	226	52	604														
				Average	7.6 Per Min.	4 Per Min.	275 Per Hr.	13.2 %	40.8 %	37.4 %	8.6 %	100 %														

Time Allowance in getting started - 10 minutes.
Time for move between offices 2 minutes each ave. 10 minutes.
Lunch 15 minutes.
Time cleaning up and getting ready to go home 10 minutes.
Total non-productive time - 45 minutes.

Figuring 6 hour night @ 200 w.u. per hour = 1200 w.u. allotted
Divide 1200 by 5-1/4 actual working hours equals 228 w.u. they will actually have to cover. You will see from above chart that 275 w.u. have actually been covered in one hour.

2 minutes each for going from office to office, or 10 minutes. We allow 15 minutes lunch period on our time and then I allowed 10 minutes time to clean up and get ready to go home. In all I estimated about ¾ of an hour of non-productive time or 5¼ actual working hours. When I divide 1200 work units, which we allot for six hours work, by 5¼ I get 228 work units they will have to cover per working hour. You will see from the chart that 275 work units were averaged per hour on the test work. There is no doubt that 200 work units is a very fair allotment. As a matter of fact it is too low. If you are starting new with the formula, I would recommend using 225 work units per hour.

The whole subject of cleaning is in need of research. At the present, the only standards generally available to guide managers in allotting work are hit-or-miss, rule-of-thumb sort of things. There is no question but that in many buildings, porters do work indiscriminately. If they are assigned to washing windows, polishing partitions, cleaning lighting fixtures or similar tasks, there is no common yardstick by which we can gauge their productive output. How much they do is nobody's business, unless they happen to do a lot of loafing, and then it becomes somebody's business.

Since this item makes up one-third of our operating costs, it would seem well worth while to approach it in a more careful manner than in the past. As far as the Gilbert Formula is concerned, it is not important to use the exact work unit base figures I have presented. These can be worked out by any manager. I am sure that the time and effort to make the detailed check of equipment and careful analysis of work performed will be well repaid. By following the general outline of procedure, any manager can arrive at his own evaluations and conclusions. I feel confident that a system based on work units instead of square feet will open the way to appreciable economies.

CORROSION OF WATER PIPES

By *H. L. Shuldener*

The condition of the water pipe distribution system in a building has much to do with maintenance and operating costs. Will your property need a repiping job, or are there measures you can take to protect the present installation and reduce rust or dezincification? Here an expert on a troublesome subject tells you what happens to water pipes – and suggests ways to deal with pipe corrosion.

WHEN the prospective purchaser or management of a large building inquires as to the physical condition of the domestic hot and cold water pipe distribution systems, it indicates that they are conscious of the possibility of a costly repiping job. They probably had "an experience." Starting as it may be, the presence of brass or copper pipe per se, is no assurance that such a repiping job is not in the offing.

When "brass" pipe first came into use it was thought that it would be immune to corrosion, but it is now known that the kind of brass pipe known as yellow brass is attacked by many types of water, especially if the water is heated. The action of the water dissolves the zinc from the brass alloy. This fact is now so well recognized that a number of cities have enacted rules in their Building Codes prohibiting the installation of yellow brass pipe in buildings. Moreover, the leading manufacturers of brass pipe no longer offer yellow brass for this type of service.

Certain waters like those along the eastern seaboard while exceptionally pure from the sanitary standpoint, are corrosive. The effect on iron pipes is to fill them up with a deposit of rust that reduces the flow of water from faucets. The effects are usually noticed first on the upper floors at certain times of peak consumption when water is being drawn on the floors below. When this happens there is also a lack of pressure to operate flushometers.

H. L. SHULDENER *is president of Water Service Laboratories, Inc., chemical engineers of New York. He is a recognized authority in this field and has directed many difficult assignments to straighten out water problems. As a spokesman for more intelligent handling of water corrosion, he has published many articles on this vital subject.*

Corrosion Damage Costly

A building which is otherwise in sound condition may have a piping system that is in such bad shape that only a complete repiping job will give the tenants a proper supply of water. It is not hard to realize the heavy cost in view of the present wage scale for plumbing work. In addition to the plumbing there is the labor of repairing plaster, and painting, and the tile work incidental to major plumbing repair jobs. Any management executive who has experienced the cost and nuisance of such major repiping jobs desires to avoid a recurrence, or make certain that the necessary financial adjustment is reflected in the purchase price if he is faced with recommending the purchase of a building whose piping system has depreciated.

Management will recognize the relationship between the condition of a building's water distribution system and its valuation. In addition, however, management has to live with the building and thus the quality of service rendered is also of importance. Therefore a knowledge of the corrosive

influences which cause depreciation and service troubles should be of interest.

These considerations have influenced lending institutions, designing engineers, and architects to appreciate more fully the significance of water quality, as well as pipe quality, as a prime factor in the design of water distribution systems in apartment houses, hotels, hospitals, office buildings, and houses. It is not generally recognized that no metal is immune to corrosion and that the rate of corrosion for a given material depends principally upon the chemical characteristics of the water involved. There is, and has been, considerable difference of opinion with respect to the duriability of the various pipe materials, but much of the conflicting testimony about the same kind of pipe in different locations is due, as stated, to the different composition and characteristics of the water supplies involved—a fact which has been completely overlooked too many times. Thus, it is not feasible to make general recommendations as to the best material to be used under all circumstances. Each individual case must be studied with particular reference to local experience and to composition of the water supply.

Know Your Water!

To appreciate the problem it is necessary to understand better the nature of water, a substance so commonplace that it is taken for granted. Simply stated, all municipal and private water supplies are extremely dilute water solutions of gases and mineral salts. The gases are atmospheric oxygen and carbon dioxide dissolved by rain in its fall through the atmosphere. The salts are mineral matter dissolved from the earth's crust by water flowing over and through it in the form of rivers, streams, or wells. These salts are predominantly bicarbonates, sulphates, and chlorides of calcium and magnesium which give water its "hardness". These are the minerals which destroy soap, that is, which make it difficult to raise a lather, and which form the whitish lime scale common in hot water tanks and boilers.

Since all the gases and minerals are in solution, unlike particles of sediment or vegetable matter, they cannot be removed by filtration, just as you cannot remove dissolved sugar from coffee by filtering it.

The few parts of dissolved atmospheric gases per million parts of water are the cause of widespread corrosive destruction of pipe in municipal distribution systems or in the piping system of a building, hotel, or private house. Such corrosion is primarily due to dissolved oxygen, aided and abetted by carbon dioxide. This gas directly affects acidity of water and has the effect of accelerating the rate of oxygen corrosion. The extent and rate of corrosion is controlled by the chemical balance of the other constituents mentioned. Distinction should be made between oxygen dissolved from the air and oxygen which constitutes part of the compound we know as water, H_2O.

Expressed in non-technical language, the total gas content of natural water is, roughly, several cubic centimeters of gas per gallon of water. The total content of various mineral salts dissolved in natural waters usually ranges from thirty to two hundred and forty parts per million parts of water. This is equivalent to approximately one-tenth of an aspirin tablet per glass of water. Sea water contains over two hundred times as much total dissolved matter.

While the total of these impurities is very small and represents the extremely dilute solution described, nevertheless the composition of "water" varies widely as regards the amounts of individual constituents. This fact has controlling influence on the

potential corrosiveness of the dissolved gases, which are either inhibited or accelerated in their reaction with the metal of the pipe. When the characteristics of a water are such as to inhibit oxygen reaction, the water is classed as non-corrosive.

Evaluating Water Factors

In evaluating the corrosiveness of a natural water, four factors are considered of prime importance, namely: hardness, alkalinity, pH, and silica content.

Hardness. Generally speaking, those waters containing relatively large amounts of hardness in the form of the alkaline salts, calcium and magnesium bicarbonates, are less corrosive than the so-called soft waters, which are comparatively free of these salts. The non-corrosive water supply usually deposits a calcium carbonate scale on the inside of pipes. It is this protective mineral coating which some municipal chemists deposit artificially in their city distribution mains. However, artificial deposits lack permanence under service conditions unless a definite composition of the water itself is maintained to stabilize the protective coating.

Alkalinity; pH. The ratio of dissolved carbon dioxide to total alkalinity of water is another important factor in the rate of corrosion. This ratio controls the water's acidity, or hydrogen ion concentration, and is known as the pH of the water. A water having five parts per million of carbon dioxide (expressed as $CaCO_3$) would have the same pH as a water having twenty parts per million of carbon dioxide and forty parts per million total alkalinity. Both waters have a carbon dioxide: alkalinity ratio of 1: 2 and have the same pH, which happens to be 6.6.

It is apparent that the corrosiveness of a water will increase with the addition of acid, such as carbonic acid, because the concentration of H ions will increase, which is the same as saying that the pH will be lowered. The pH of most natural waters generally lies within the range of pH 6.0 to 8.0.

Temperature. In addition to chemical factors affecting corrosion, temperature is the most important physical factor controlling the rate of reaction. It is considered that a rise in temperature of about 25 to 40 F will double the speed of reaction. Thus, while a particular water may be only mildly corrosive to the cold water piping of a building, it may be very corrosive to the hot water piping. The reason for frequent specification of less expensive pipe material in the cold water system, and more expensive, more corrosion-resistant, piping material in the hot water system of a building, becomes obvious.

What Happens Inside Pipes

The various pipe materials in common use are steel, wrought iron, the several brass alloys, and copper.

The effect of corrosive waters upon iron piping, even when galvanized, is usually evidenced by loss of carrying capacity in the piping, which becomes clogged with rust (iron oxide) caused by the direct combination of iron and oxygen. Rust has about ten to fifteen times the volume of the iron of the pipe wall from which it was formed. Thus it is evident that iron pipe lines can become completely clogged by the rusting of only a small percentage of the pipe wall thickness. Another form of iron pipe failure results in leaks caused by local pitting, in which case the oxygen attack is confined to small areas. In addition, a common nuisance frequently arises when some of the very fine rust particles remain suspended in water, causing the familiar "red" or rusty water.

The effect of corrosive waters upon brass

piping takes the form of dissolving the zinc from the copper-zinc alloy. This action is known as "dezincification"; it appears to be caused by combined action of oxygen and carbon dioxide in water. The net results of this action is the removal of the zinc, leaving a porous, brittle form of copper which eventually causes pipe failure. Leaks usually occur first at the root diameter of threaded joints, where the metal is thinnest. Moreover, the pipe breaks easily at such points when repairs are attempted.

Dezincification has been found to be confined to the so-called "yellow" brasses. Three brass alloys are commonly used: "low" brass, or Muntz metal (60% copper, 40% zinc); "high" brass (67% copper, 33% zinc); and "red" brass (85% copper, 15% zinc). The first two are called yellow brasses. In many localities these low copper-content alloys have proved disappointing as compared with previously used iron piping.

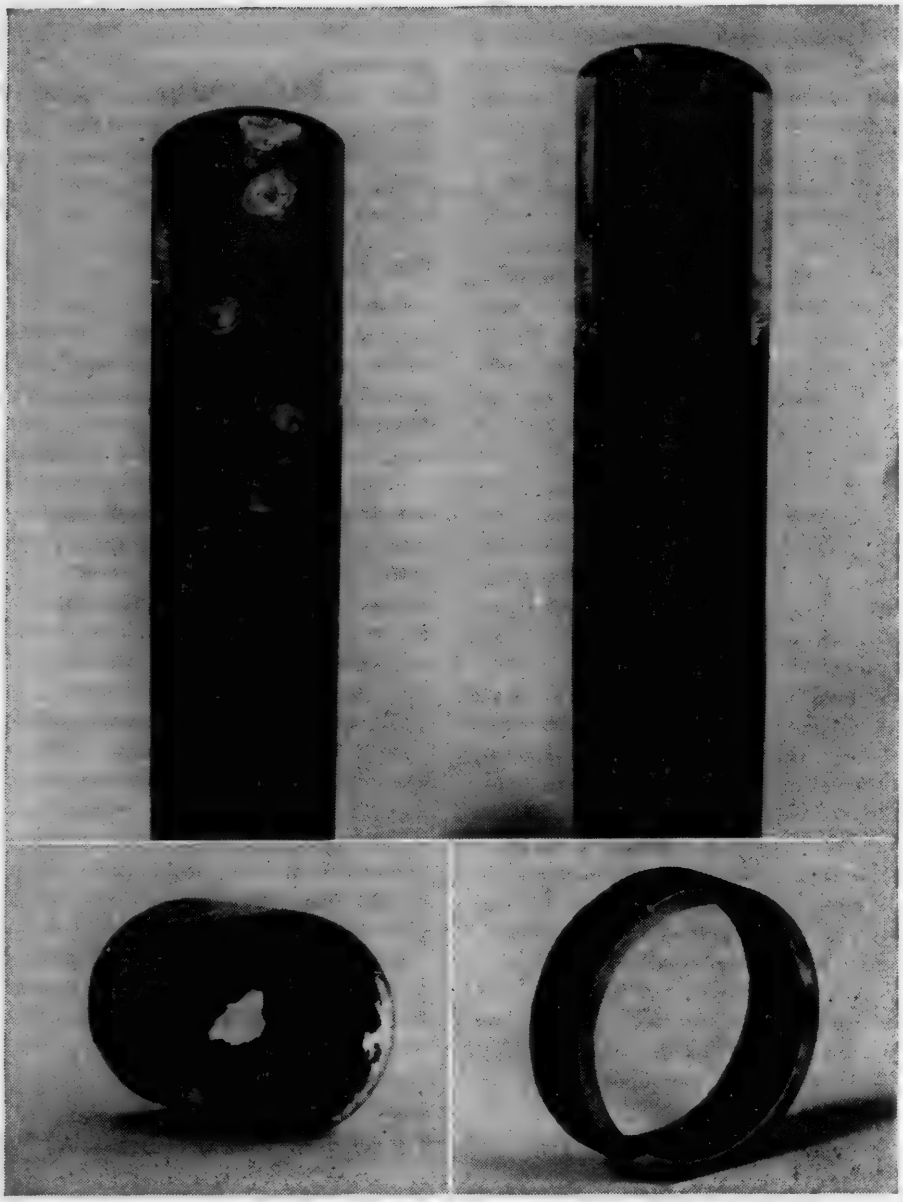
Red brass and copper are considered the most generally resistant to corrosion. Their increasing use, following poor experiences with the yellow brasses, has indicated, however, that even these materials should be used with discretion. When a corrosive water acts on copper it may dissolve a sufficient amount to produce green staining of white plumbing fixtures and laundered articles. When soap or any other alkaline material is added, the water will turn blue. Indiscriminate choice of copper pipe or tubing without regard for the composition of the local water has produced many such complaints.

Copper tubing is furnished in three different weights known as types K, L and M, and are characterized by the relatively light wall thickness and light weight per linear foot. For example, the wall thickness of type M copper tubing is approximately one-quarter that of standard iron or brass pipe. Unfortunately a great deal of the early use of copper tubing was the type M. Considerable trouble has been experienced due to leaks caused by perforations of the thin tube wall in as short a time from 5 to 8 years. The manufacturers of copper tubing prefer that the relatively heavier weights be used.

How Water Is Treated

Many municipalities are chemically treating their water supplies in order to reduce corrosion. Briefly, chemical treatment involves changing the corrosive characteristics of the water by changing nature's original amount and ratio of dissolved mineral salts and gases. Addition of lime or soda ash to increase alkalinity and reduce carbon dioxide content, thus raising the pH, is the common method. However, many factors limit this practice, two of which are the cost of chemicals to treat an entire municipal supply and the effect of the changed water characteristics upon existing industrial processes and power plant operation.

Many owners of large commercial buildings and hotels engage chemical engineering assistance to adjust the mineral content of the municipal supply as it enters their properties, in order to check corrosion of piping. The principle is the same as the municial method, except that more effective results can be obtained because, for individual building supplies, liquid sodium silicate is the alkali used as the basis for the treatment. Carbon dioxide is neutralized, alkalinity and pH of the water are raised, and in addition, a protective siliceous film is formed on the internal surfaces of the pipe. The nature of this film depends on the composition of both the water and the pipe. By thus conveniently inhibiting corrosion, less expensive pipe materials are given extended life and costly pipe repairs are reduced. Common experience in a num-



Results of Corrosion*—(Top) *Brass pipe shows whitish tubercles characteristic of plug dezincification; clean pipe shows protection afforded by treating water.* (Right, Lower) *Yellow brass pipe showing copper plugs typical of plug type dezincification.* (Left, Lower) *What rust does. Section of two inch iron pipe removed from hot water system in New York City apartment house less than 10 years old. Rust has virtually filled pipe.

ber of cities such as New York, Philadelphia, and Washington, has indicated that the cost of such treatment is less than the interest on the cost of an extensive repiping job.

For example, during the past few years it has been necessary to utilize ferrous piping materials for water distribution systems in new building construction due to wartime restrictions on use of copper and brass. As a result, some serious problems have presented themselves in localities where the public water supply is corrosive. Rapid development of "red water" troubles, and even pipe failures due to pitting or clogging with rust, are characteristic of past experience in those localities.

Typical was the experience of a large U. S. Public Health Hospital where black ferrous piping had been installed. A very distressing red water condition developed within six months after the buildings were opened; it became extremely difficult for the hospital to function because of the impossibility of keeping surgical instruments, laundry, and drinking water fit for use. This trouble was completely eliminated within a few weeks by corrective water treatment which reduced the corrosiveness of the water.

Design Makes a Difference

However, whether water treatment is applied, or whether the proper choice of pipe material for the available water supply has been made, there are important, fundamental considerations other than corrosion which directly affect the useful life of a piping system. These considerations are the design, fabrication and operation of the building's water distribution system. Many of the ills which develop in piping systems which must carry a corrosive water supply can be minimized, sometimes avoided entirely, by proper design. For example, there are a number of different piping layouts each with its advantages and potential troubles. Space does not permit of their discussion here.

Another important element of design is means for the control of hot water temperatures. Positive hot water circulation should be provided by means of thermostatically controlled circulation pumps in order to reduce temperature fluctuations, thereby minimizing the expansion and contraction strains which are a common cause of leaks at joints. Moreover, in a hot water system in which temperature fluctuation and the resulting expansion and contraction of piping are held to a minimum, the initial formation of scale or rust film will not flake off to provide fresh metal surfaces for corrosive attack. Good results with ferrous piping systems in many hotels, when provision has been made for maintenance of uniform temperatures twenty-four hours a day, stand out in marked contrast to the much shorter life of hot water systems in apartment houses in which water temperature fluctuates from high during the day to low at night.

Incidental advantages of good circulation and controlled temperatures are avoidance of complaints from tenants and of waste of water and heat, caused when tenants draw large quantities of luke-warm water in order to get hot water. Moreover, automatic controls should be provided for keeping hot water temperaures at approximately 140F. The life of the piping is very closely related to the temperature of the water it conveys. It is a recognized fact that at temperatures above 140F corrosion accelerates rapidly. In large buildings a temperature recorder is very helpful in maintaining good control.

Watch Pipe Sizes

Pipe sizes should be ample to allow for frictional resistance, a particularly important point in the case of small iron pipes.

Initial incrustation frequently renders such small pipes unless in a short time, whereas in a larger sized line it acts as helpful protection against further corrosion without materially reducing the pipe's capacity. It would be well to limit the minimum size of iron pipes in buildings to ¾″ or 1″ in diameter. The difference in cost between ½″, ¾″, and 1″ pipe is so small that it ordinarily is economically unsound to use the smaller pipe. Also, small piping diameter means higher water velocities which, up to a critical velocity for each diameter, increase both the rate of corrosion and mechanical damage due to water hammer.

In fabrication, as in design, experience also dictates certain precautions which will result in longer pipe life. For example, the use of bushings, street ells, and reducing fittings should be minimized as they, too, are causes of bottlenecks, because they provide shoulders against which deposits accumulate. Troubles caused by such fittings have been recognized by authorities who are studying the possibilities of improved design of pipe joints, fittings, and couplings, including the use of fewer fittings, in lieu of which pipe can be bent on the job by portable hydraulic pipe benders, thus increasing the efficiency of the piping system.

Deposits Cause Trouble, Too

Of equal importance, of course, are current operating techniques and the intelligent analysis of plumbing troubles. This will keep maintenance costs down and increase the over-all life of the piping system. For example, a common trouble, "poor flow" of water from faucets, is caused by deposits in the piping. Horizontal iron pipes, particularly branch lines from risers to taps, are usually the first to become clogged. The trouble can usually be located by comparing the flow from the same riser on different floors. For instance, if the flow from a certain faucet is poor, but there is good flow from the faucets on the floors directly above and below, it is evident that the flow in the riser is adequate but there is a stoppage in the branch line.

Such stoppages may be due to loose particles of scale, dirt, or rust which may have accumulated in the pipe at an elbow or reducing fitting, and often can be dislodged by the simple expedient of reversing the flow. This can be done by shutting off the hot water riser, connecting the cold water faucet to the hot water faucet at the basin or tub with a piece of rubber hose, and flushing out by opening another hot water faucet on the same riser. Flushing out through the bottom of the hot water riser is even more effective. Similarly, hot water pressure can be used to clear out the cold water branch. This procedure may work in relieving local stoppages, but will accomplish little when poor flow is due to general corrosion.

Social Aspects of Decentralization

By *Don G. Mitchell*

One of the controversies of the present time is that which rages over the basic desirability of decentralization. The author presents his arguments as to why decentralization will be of ultimate benefit to society.

AMERICA has grown great by mechanization. It has developed the largest volume of power and has so increased the productivity of the individual workman that our standard of living exceeds that of any other nation. Wages are higher here; hours of work generally are less. Workers live in better houses; they have more automobiles, radios, telephones—but still they are uneasy. Their discontent is evidenced by the degree of labor organization, by the number of strikes, by the repeated demands for more money and other benefits, by the number of radical leaders, by their political action groups, by their desire to have more of a voice in management decisions.

Regardless of what the development of the machine has accomplished for the people of the United States, it has progressively taken from the workers something that cannot be compensated for by more material things and more physical comforts—individuality.

One fine thing about the American worker is that he has a sense of essential values. He realizes the importance of such fundamental things as freedom, individuality, soul. When these are gone, life itself becomes mechanical and all men puppets, subject to the whims and fancies of those in control.

We see this happening in many countries where the worker never did share in the good things of life as much as the American worker. Nevertheless, the doctrines of statism and communism have gained converts here.

Most people cannot understand why anyone enjoying all that America offers by way of independence and plenty, and even luxury for most, could accept any authoritarian doctrine such as communism. Such acceptance comes only when labor is convinced that it has been reduced by the machine to an economic abstraction.

Battling these foreign political and social concepts by legislative enactments may produce some temporary checks, but in the long run more progress will be made by understanding and eliminating the sources of infection. Here is a job where industry by voluntary action and progressive management can do more good than government can do by regulatory legislation.

Government, especially in a democracy, does not cure social problems; it merely applies mass soothing syrup in the form of mandatory restrictions that leave little or no incentive for voluntary betterment. In fact, social history is full of proof that the

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DON G. MITCHELL *joined Sylvania Electric Products, Inc. of New York City as vice president in charge of sales in 1942 and was elected president in 1946. Prior to his association with this firm his forceful selling and marketing methods put milk in containers, beer in cans and pepsi-cola in "easy to carry home" six-bottle containers. He has served two terms as vice president of the American Management Association and is at present a member of its Board of Directors and Exective Committee. He has been a vice president of the Sales Executives Club of N. Y. and has been active in the National Association of Manufacturers and the American Marketing Association.*

more we leave to government in the social area, the more circumscribed and regimented the individual becomes.

Decentralization and the Age of Man

Democracy can go forward only when men and women are persons, not numbers. The dignity of the worker must be restored. As America was made great physically by the Machine Age, through which we have come to our present state, so will America become socially much greater by starting now to establish the Age of Man.

Industrial decentralization is an important step in that direction.

Lest anyone gain the impression that decentralization is purely an effort to correct social problems that have arisen in industry, let me assure you that it is very realistic and practical. Neither the company with which I am associated, nor any other manufacturer with a desire to be progressive, could afford to engage in decentralization unless it had proved itself economically. There are some operations, such as heavy equipment production, that demand concentration and decentralizing its manufacture would, therefore, not be justified economically. Even there, however, it may be that feeder plants for certain parts and operations could provide some degree of decentralization.

Advantages of Decentralization

Any loss in the efficiency that comes with centralized coordinated production, we feel, is more than made up by the improved productivity of the employees in our smaller plants. For instance, we have found a better attendance record, less absenteeism, smaller turnover and greater pride in the work. Spoilage is less and production errors are caught more readily.

It may not always be possible to take off these benefits from one's records. There are many overlapping influences that sometimes have to be weighed before the benefits can be evaluated properly. For instance, it is not at all unlikely that wide variations in efficiency as between two plants can be attributed more to the experience of plant managers than to plant location. We know this to be true in some of our plants. Often an older and more experienced manager of a plant which is no more favorably located than a plant managed by one less experienced has a better record.

Other factors that have a bearing on results are the number of changes of type of production, newness of the general product, and union leadership. One cannot expect, therefore, to get a clean cut comparison merely by isolating the factors of decentralization when so many other factors, some of which may be controlling, are present.

There are other benefits from decentralization which, though classed by some as intangibles, are nevertheless real and substantial. With the increase in divisions and subsidiaries and with a growing diversity of product, decentralization helps to break down the complexity of the task and lightens the burden on any group of executives.

Plants located closer to regional markets bring faster and better customer service.

During periods of expansion less industrialized areas frequently offer many attractive features, such as lower land cost, taxes, etc.

Especially important is the opportunity that decentralization offers for experimentation, particularly in the field of industrial relations, before instituting plans, policies and procedures on a company-wide basis. Examples are installation of job evaluation, time study, merit rating, rumor clinics, employee attitude surveys, running plants with or without cafeterias or broad programs of recreational activity to get a comparison.

However, decentralization is not a patent

medicine that will cure all our social and economic problems just by taking large doses. Nor is it an unmixed blessing. It, too, has its pitfalls and these must be watched for and understood and not overlooked in a blind allegiance to the principle.

Aspects to Consider

For instance, a popular conception of decentralization is the establishment of many factories in rather small communities. That is not correct. Some small operations can be carried on in small places but, in general, decentralization should not be carried so far down the scale of community size that it boomerangs. A community, for instance, must not be so dependent on a single plant that a shut down brings suffering to the entire population. Rather than let such a situation develop, it might be far better to help the community to secure more diversified employment, even if it means a reduced operation on the part of the single plant. If a factory is so large as to absorb nearly all the available labor, it is penalized to the extent that it has little or no opportunity to exercise any selectivity in hiring workers; while the local people are likely to feel that they have little or no freedom in choice of employment.

Regardless of the management, when a plant becomes too large for its locality the workers know it and, realizing *how* the company depends upon them, take advantage of the situation. Under such circumstances plant efficiency naturally suffers.

In other words, it is possible for a community to be too small to justify the establishment there of a factory of the proper size for a particular operation. Since different products need different plant sizes for economic production it is difficult to set any hard and fast rules for ideal community size. We do know, however, that communities can be so small or local operations can absorb so much of the local labor that they are mutual liabilities.

Size of Plant

Diversity of location and community selected are important but not more so than the size of plant. Herein lies the very heart of decentralization.

How big should a plant be to enjoy the best operation? General Robert W. Johnson, Chairman of the Board of Johnson & Johnson, stated it very aptly when he said: "A factory should be as long as a man's shadow. A factory which one man can fully comprehend is just about the right size."

How many times have you heard it said of a company, grown large, that there isn't the same spirit as when the "old man," who started the company, was around? He not only knew every operation, but he also knew every employee and could call them by name. No matter how rough or gruff he may have been he was as a rule greatly respected. He may have been a martinet but his employees were people, not mere numbers.

In some ways, I like to think of decentralization as a return of the "old man" to production. Each plant, in other words, should be of such a size that one man could know everything that is going on at each bench, know every machine operation and, equally important, know all the employees. Under these conditions, the plant manager is boss. He operates that plant and makes decisions—within, of course, the company's basic policies—as though it belonged to him.

Plant Policy and Control

With such a program of decentralization, the broad policies will be worked out by and come under the control of top management, after which the executive direction of the company will be more advisory and con-

sultative than directive. Plant managers will be expected to make their own decisions and to be responsible for results. There is little room for alibis where there is undivided authority.

When expressed simply it sounds easy, but as a matter of fact greater attention to organization duties and responsibilities is necessary in a decentralized operation because the channels of communication between individuals are not as simple. Just the mere physical separation of many miles makes it more difficult for two people to thrash out a difference of opinion than if they were in the same building or group of buildings. This does not mean that men have no room for self-expression—they have plenty of it. All that is meant is that when a man is given a certain responsibility or authority be sure that it is clearly stated and that it is generally understood.

Management and the Community

When properly set up, the local manager becomes important to himself, to his employees and to the community. When the newspaper reporter calls, the manager does not have to get a release from the central executive office. He is accepted by the Chamber of Commerce and the service clubs as the head of another business. He does not have to get permission to give to or to engage in Community Chest, Red Cross or other local drives.

Practically every one of our numerous plant managers is an active member of Rotary, Kiwanis or the Lions. They are taking leading parts in fraternal orders, community drives, Y.M.C.A., Boy Scouts, and political clubs. Among our plant managers are bank directors, members of borough councils, and members of any number of civic committees and groups.

Such men in a large factory would have charge of but a section and would have but a fraction of the responsibility as well as the personal dignity and the standing within the community. They would not be the company to anybody. They would merely be supervisory employees.

Decentralization's first contribution to the Age of Man is the building of men at the management level.

The Rank and File

What has it done for the rank and file?

Concentration, mechanization and production lines naturally call for less skill on the part of some workers, thereby giving them less and less opportunity to be personalities or to have the incentive to produce more and better work. As workers become separated from management, mutual respect and confidence decrease and eventually cease.

When workers feel that they no longer are personalities but, in effect, are mere numbers and that the big boss doesn't know them or what they are doing, how much enthusiasm can they put into their work or how much loyalty can they really have for the company that employs them? Is it not natural for them under such conditions to merge themselves into a mass personality through a labor organization?

Add to this loss of occupational personality the living conditions of a big industrial city where so many of the people live in small and unattractive quarters and you have the makings of a first-class mass feeling of frustration. If people get no enjoyment out of working, or out of living, if all is colorless and uninteresting, is this not fertile soil for sowing the seeds of discontent?

Social Relationships

In a small plant, the manager has to live with his people. They go to the same church or lodge, their children to the same

school. Since there is no separate social level, there is a closer personal bond between management and worker. The plant manager must get along with his people and the more he is liked the more will the workers try to help him make a success in the operation.

After all, if one bowls on the same team with the plant manager, or one's wife is on the same church committee with his wife, or one's son dances with his daughter, there cannot be any great class distinction. There can't be any such distinction for workers and managers must live as neighbors. There is no specific area where either group lives. There can be no doubt but that the friendly relationship, as one of our plant managers expressed it, that is nurtured over the garden fence carries over into the job.

Under such circumstances, there can be no feeling of frustration because workers and management belong to the job—they are a team. And how natural it is, then, for them to take an interest in the work!

As another of our plant managers put it, "cooperation and friendship from plant manager to the sweeper help greatly to develop the necessary sound labor relations that every company must have if it is to prosper and grow."

Thus, decentralization restores a working personality to labor and dignity. Work is once more fun and people are happy in their employment.

Communism can never take root where people are happy and contented.

Small vs. Large Communities

People in small and medium sized communities lead a much more natural and normal life than those in large cities. For one thing, they can get to work easily and quickly. The average for our small plants is between 10 and 20 minutes.

Instead of paying for their amusement they make most of it themselves and thus are more sociable. They can fish and hunt and work in their gardens. They can play ball or golf or tennis at their own club. There is much they can do in their leisure time that is clean and wholesome.

In one of the counties near where we have a plant there are said to be more deer than inhabitants. It is not unusual for one of our people to go fishing after work and be back home in time to have the catch for supper.

In the larger industrial centers, there is less to do in one's leisure time, especially if one lives in a rented tenement or apartment. The desire for company takes fellows, knowing few people in the neighborhood, to pool parlors and bars. Of course, small towns have these, too, but they don't get the same patronage. How easy it is to gripe when you have nothing interesting to occupy your time! How easy it is under such conditions to get cockeyed ideas!

People are clean-minded if you put them in clean surroundings.

Civic Participation

People in smaller places have a greater respect for government, and for law and order. It may be because the form of government is simpler, or it may be because everybody knows everybody else, or it may be because they can't afford a large paid municipal organization—whatever it is, people in smaller places have a greater sense of responsibility for civic affairs.

For one thing, workers can participate in government. We have several such instances in our own operations. One man was mayor; several have been on a borough council and school board.

People take a greater interest in politics in smaller places and have an opportunity to be on the inside—maybe holding office in a party. Voting is a responsibility in a small place.

People also have a greater opportunity to work for the good of the community. Any number of our people have been on fund raising committees, or in civic associations where they have been called on to do something. One of our men headed a drive to buy uniforms and instruments for the high school band. Many have taken an active part in Boy Scouts, Girl Scouts, and Y.M.C.A.

Such activities build citizenship. People do not like to destroy that which they have worked for and are a part of.

Small vs. Large Plants

In smaller plants, people are thrown closer together and have a better opportunity to understand the relationship of their work to the whole. Instead of their jobs being meaningless dull routine, they can see that what they are doing is important. Their work becomes more interesting.

Some employees who have worked in both large and small plants have told us that they like the smaller operations because people are brought closer together and a more friendly atmosphere is created. With it, they say, they find a spirit of helpfulness, cooperation and fellowship.

People can't feel any loss of occupational personality where friendliness is the rule.

Labor Relations

With a close working relationship between employees and between workers and management, such as has been described, there is less room for misunderstanding. It has been our experience that labor relations, as a result, are on a much higher level than those in plants where management is far removed from the working force. The number of grievances is smaller and trouble arises less frequently.

Management, having of necessity a greater respect for the workers as human beings, cannot help reflecting that point of view. Labor, being quick to sense any such attitude, reacts accordingly by having a high regard and respect for the company, especially when they hear workers in other plants gripe about the indifference of the treatment they receive. Decentralization provides the mutual confidence that is necessary if we are to avert social disturbances.

While it is true that decentralization offers the manufacturer a fresh labor supply and one that can be checked more readily for references, it also offers people in smaller communities an opportunity to find gainful occupation without breaking up their homes. Thus, by moving into smaller places industry is contributing to a better distribution of employment and to a better balance of market and economy between dense and less heavily populated areas.

However, plant locations should be picked selectively in areas where not only the supply of labor is adequate to the need but where the introduction of a plant will not produce a localized labor shortage of the type of people required.

Decentralization—a Summary

Aside from the economic benefits to be gained from a well thought out program of decentralization, results to date indicate that it offers a practical means of re-establishing the dignity of the worker as an individual. It can develop a mutual respect between workers and management and give a new meaning to the responsibility of employment and the fun of work. It can give more enjoyment to leisure time. It can build citizenship and pride of government. It can be a powerful means for combating the industrial unrest and discontent on which communism feeds.

Such is the social concept of decentralization—the beginning of the Age of Man.

MEASURING THE QUALITY OF OCCUPANCY

By *Hobart C. Brady, CPM, MAI*

Most managers are engaged in a general real estate business. As managers, they are concerned with values, and so they acquire knowledge of appraising. Here a distinguished leader discusses some of the human factors which cause tenancy to have important effect on appraisal. They prove to be equally important to the vital management decision involved in the question, "Will this be a good tenant for this space?"

IT IS hardly necessary for me to remind property managers of the progress which has been made in the science of real estate appraising during the last two decades. The depression of the Thirties discredited many of the appraisal practices and assumptions of the Twenties, plunging the profession of real estate appraising into an intense period of self-examination, and sending it forth in search of more reliable criteria of value. The results of this search have been fruitful.

Great achievements have been made in a number of fields. These include calculating reproduction costs; developing and applying formulas for determining the present worth of assorted future benefits; safeguards in estimating and projecting the flow of income; better procedure for determining the use value of money and translating it into justifiable capitalization rates; greater understanding and facility in interpreting financial and operating statements, and finally, weighing the factors which reflect trends of value and real estate demand. These are the more material aspects of value, factors which lend themselves to slide rule computation and established patterns of thought.

The field of real estate appraising in which much remains to be done is in the realm of the intangible, the human factor as it affects value. It is an exciting field to contemplate.

The Human Element Counts

My son is studying business adminstration in college, expecting to major in accounting. I was visiting with him about the subjects which he likes best. He said, "Dad, the only subject I've really liked is mathematics. It's the only subject in which I have been able to determine the answer and to know whether I was right or wrong."

HOBART C. BRADY *is the President of the National Association of Real Estate Boards. For many years one of the outstanding leaders of the Association, he is noted as an eloquent speaker and an able writer. He has frequently lectured on real estate subjects and is one of the most popular speakers in the nation on real estate brokerage and salesmanship. He has conducted many sales conferences and courses.*

He now heads his own firm in Wichita, Kan. Prior to setting up his own organization he had long experience in management problems as the real estate officer for a trust company operating a number of buildings. He has held many offices in NAREB and its affiliated organizations including Regional Vice President and member of the NAREB Board of Directors; Regional Vice President and member of the Governing Council of the Appraisal Institute and the Brokers' Institute. A leading citizen of Wichita, he has long been active in civic affairs, including serving as President of the Wichita Chamber of Commerce.

I told him as he grew older he would discover most of the problems of life revolve about the human factor, and the human factor defies the laws of mathematics. It recalled to me a dinner table conversation several years ago at Philadelphia between George Schmutz and Lee Hyder. I have forgotten the principle of appraising they were discussing, but in connection with it George made the observation, "This, after all, is a philosophical concept. Philosophy is the mother of all knowledge. It is more inclusive than the so-called exact sciences. It is a pretty good rule in appraising to ask yourself, 'Is my assumption philosophically sound?'"

I thought at once of a certain Wichita real estate dealer of superior ability. He had the reputation of being a hard trader. When he bought, he was clever enough to manipulate the deal in a manner that required him to pay less than the seller was entitled to receive. When he sold, he knew the tricks by which he could pay less than a regular selling commission. Judged by the principles of mathematics, his accumulation should have added up that much faster. The fact is that he left Wichita broke and discredited. His mathematics were correct but his philosophy was unsound.

I do not mean to imply that we have heretofore ignored the human factor. We recognize its importance in analyzing what we call the quality of income. We recognize it in constantly counseling that the application of tables and formulas and theories of appraising be tempered with common sense. However, it has been largely a negative recognition, an admission that there exists an intangible factor growing out of philosophy fundamentals and human nature which, being unable to measure, we leave to our instinctive judgment which we call our common sense.

Factors of Evaluation

We edge into this realm somewhat uncertainly in placing greater emphasis upon interpreting the significance of financial statements and operating reports. We study the relationship between current assets and current liabilities, compare net income in relationship to gross sales, trends of production cost in relationship to profits, record of business growth. This limits us largely to the necessity of predicting the future in terms of the past. Our judgment upon individual management is made usually by comparing it with the average for the industry. This brings us to a characteristic of present appraisal processes which I would like to emphasize, namely, that these processes cause us to think in terms of the hypothetical and the normal as distinguished from the specific and the exceptional.

In defining market value we say, "Specifically the highest price estimated in terms of money which a buyer would be warranted in paying and a seller would be justified in accepting, provided both parties were fully informed, acted intelligently and voluntarily." Here is a good illustration of the hypothetical nature of our ordinary appraisal objective. We are dealing with "a buyer" and "a seller" as distinguished from "the buyer" and "the seller."

This is largely the difference between the appraisal problems, respectively, of the mortgage banker and the real estate broker. The mortgage banker is primarily concerned with the protection of his principal in event of default. What are the probabilities of income under average management and what are the prospects of sale to an average purchaser? The broker deals with specific buyers and sellers. He is less concerned with what an average buyer would be justified in paying and more concerned

with what a specific buyer can afford to pay in view of what may perhaps be exceptional need or possibilities of profit. This may vary greatly from that of a hypothetical average buyer.

The broker deals not with an owner but with the owner to whom a specific price may have an attraction greater or less than it would have for a hypothetical average seller. Thus it is that broker appraisers are required to make greater studies of the specific problems of buyer and seller than may be necessary on the part of mortgage appraisers. Thus the quality of occupancy, whether that of owner or lessee, is of great importance to the broker appraiser who is appraising for investment purchase.

Value in a Tenant

All of us have stories we could tell illustrating the effect of occupancy upon value. In Witchita, Kansas, in 1935, a hardware store occupied a corner 75 feet on a side street one block south of the 100% district. The rental was $350 per month. The tenant was paying the rent with greatest difficulty. We negotiated a five-year lease with a local exclusive ready-to-wear concern operated by a man and wife at a rental of $750 per month, with the tenant to assume the cost of alterations.

Our judgment of the ability of the couple successfully to merchandise the location was vindicated. An appraiser analyzing this property in 1934 would probably have considered it improperly tenanted and thus have modified the probable income as reflected in actual earnings. However, it is quite unlikely his projected income would have been as high as that which an appraiser would have assumed had the appraisal been made in 1940 after five years of exceptionally good merchandising, during which period the rental value of the property in the block had enhanced by reason of the increased pedestrian traffic of qualified shoppers which the store had brought and which caused the tenant to gladly renew the lease upon a basis of $1,250 per month. The tenant had created much of the value which he purchased in his renewal at a higher rental.

This story is in no sense exceptional. If the quality of occupancy has such a great influence upon value, is it not important to attempt a more thorough measurement of it?

Those of us who are appraising primarily for investment purposes have probably wrestled with this problem more than those who are appraising for mortgage loan purposes. Exceedingly competitive conditions which prevail both in the field of real estate loans and investment have placed a premium upon this particular evaluation. The diminishing return from mortgage loans and investments in property leased to well known chain stores or corporations which have achieved public acceptance as to the quality of occupancy which they represent, forces the investor or lender to give consideration to property occupied by individual owners or tenants who may not have impressive printed annual reports or a long history of successful operation, yet whose liabilities may be well within the proper ratio to assets and whose probability of success may be excellent. How can they be recognized?

Keys to Judging Quality

I will enumerate six considerations which I believe are guides to determining the quality of occupancy where individuals or family corporations are involved. I do not claim they are inclusive nor do I wish to appear too precise or profound in advocating them. They are offered as being indicative.

The first consideration I would list is,

"Has the individual the proper basic experience and a good formal education?" There is an old adage, "You cannot teach what you do not know. You cannot lead where you cannot go." The individual who has a good formal education and who began at the bottom and worked his way up has the best foundation for successful management. The practical experience is essential to understand the problems of each process involved in the business. However, formal education enables men to adapt themselves more readily to new and novel conditions. So-called practical men do well as long as conditions prevail which existed at the time they learned the business. They often lack the adaptability which is possessed by men with a better formal education.

I recall the many real estate and mortgage loan firms operated by practical men of limited education during the Twenties. When the depression came they seemed unable to comprehend what had happened, and were unable to adjust themselves to it. Men who had had a good formal education in addition to practical experience excelled in meeting this test of adaption.

A second consideration is, "Does the enterprise enjoy on-the-job proprietor supervision?" This is especially important in connection with small businesses. It is difficult to employ supervision that is as effective as that of the proprietor. If the proprietor has progressed in the point of age or has reached a state of financial competency to where he is taking more and more time away from the business and leaving it in the hands of subordinates, it manifests a weakness in this particular factor of qualifying the occupancy.

The third consideration is, "Has the individual demonstrated ability to succeed in a normally competitive situation? Is it an inherited business?" A great difference in the quality of occupancy is reflected in an insurance business built by a man who came into the community a stranger, established his own friendships and proved the value of his own counsel, as compared to a business assembled quickly by a young man taking over a business which his father-in-law had developed.

We have many industrial firms today that grew up as war contractors. They have not yet proved their ability to meet normal competition either as to merchandising or production costs, although they may have converted with apparent success to peace time manufacturing. Competition has not yet been normal. Many firms today show impressive earnings which can be traced to enhancement in inventory values, no criteria of managerial ability. Investigation here might even indicate a dangerously speculative temperament on the part of the management.

Cut-Rate or Quality?

Here is the fourth consideration, "Is the business based upon a quality or cut-rate service or product?" It is important in evaluating the quality of occupancy to be able to judge the likelihood of a proprietor "sweating out" the adverse periods which come in business operations. The proprietor who is content to run a cut-rate business reflects a mercenary sense that has overwhelmed his personal pride. He cannot be proud of the pine boards, the adulteration of products and deterioration of service which is involved in a cut-rate operation. He can be proud only of the profit which it produces. This profit urge becomes so great, the quality of service or product falls below minimum standards and patronage is lost. When the operation becomes unprofitable, the lack of personal pride prompts the individual to make use of all the known devices for rendering his occupancy undesirable, preparatory to his negotiations for a

release from his just liability of occupancy.

The individual who renders a quality service or offers a quality product manifests two attributes which are important in rating the quality of occupancy. He possesses the strength of character to ask a proper price for an adequate service or product, which alone can build an enduring patronage. People look for bargains but can be satisfied only with quality. In the development of a quality service or product, an individual manifests a laudable personal pride. He is proud to merchandise under his own name. He is constantly studying ways and means of improving his service or product rather than perfecting tricks to exploit his customers. He builds his personality into the business. He is more determined in "sweating out" adverse periods.

Clues in Personality

As a fifth consideration I would suggest, "Does the individual have a sense of social responsibility?" This has to do with the obligation which he feels toward his fellows. A good clue is the extent to which he shares his time and money in community projects, such as a church, the community chest or chamber of commerce. His participation in these activities indicates his appreciation of the fact no man can live unto himself.

In following this clue it is important to distinguish between participation in such activities for reasons of personal publicity, resulting in the neglect of one's business, and participation in them as an expression of a sincere desire to do one's share in the collective work of the community. The distinction is usually obvious to any discerning person. The importance of this consideration is two-fold. A person who possesses such a sense of responsibility will regard seriously his mortgage or leasehold obligations. He also will recognize his employer obligations to his employees. This will result in more congenial working conditions and better compensation, important factors in the probable success of any business enterprise.

A sixth and final consideration is, "Does the individual recognize his own mortality and the importance of training successor leadership?" Beware of the one-man organization wherein no one is being trained to assume the responsibilities of leadership. This is one of the common defects of small enterprises.

Several years ago we were called in to liquidate a well established chain of filling stations. The organization had been built up by the driving personality of the founder who had never encouraged or permitted the development of anyone to succeed him in leadership. Consequently, liquidation of the business followed his passing. In contrast, I visited Boys Town in Omaha shortly after the death of Father Flanagan. The remarkable fact about this great personality was the intelligent manner in which he had prepared for his own removal from an institution which had been developed so completely about his personality. Father Flaganan met this final test of individual leadership.

All of this has led me to these conclusions: It is my opinion the highest quality of occupancy is reflected in an individual or firm which enjoys an appropriate balance between practical experience and formal education; enjoys on-the-job proprietor supervision; has experienced normal competitive conditions; offers a quality service or product; manifests a sense of social responsibility; and is training successor leadership. Such occupancy enhances the value of the property as an investment and widens the margin of security on mortgage financing. It deserves our thoughtful consideration both as real estate appraisers and managers as well.

MAINTENANCE EXCHANGE

By *David L. Keith, CPM*
EDITOR

Letters of Inquiry,
Comments by Readers,
Notes by the Editor

Prizes for Maintenance Men

Many property managers who have seen maintenance men think up some unusually good ideas have wished there were some method of rewarding other than words of commendation or a prize from their own organization. Throughout the United States, there are many maintenance men who have had good ideas and who are using them in their own buildings. Unfortunately, however, the communication to other property managers of these unusual ideas is not always as desirable as it might be.

This column will now make an attempt to bring these two elements together. Managers may submit ideas developed by their maintenance men for handling problems or using "gadgets." These items will then be checked for interest, usefulness, and practicability, and a $5.00 prize will be awarded for each item appearing in the column.

The $5.00 award will go to the maintenance man and three extra copies of the JOURNAL will also be sent to him so that he may show his friends. Naturally, his name, address, and property management company affiliation will be shown also.

Here's a chance, CPM's, to reward your maintenance men in a manner they can appreciate. Few of them would miss the opportunity to get their "brain child" written up in a national magazine.

In cases where more than one item per issue is used, duplicate prizes will be awarded.

Frozen Downspouts

Manager Sidney M. Schwarz, Dover, New York, writes in with a problem which many of you may have met in your own areas. We would appreciate any suggestions from other CPM's.

Quoting his letter:

> "In this section of the country, leaders on the older type building are exposed and tend to freeze up solid between the thimble and the ground. We have been using a chemical which is inserted in the top of the leader, more particularly at the top of the thimble, and the salt water that comes from the melting of the ice as it touches this chemical tends to keep the leader open. This is not completely satisfactory, we have found this winter, and we are wondering whether there is a better method in use in other sections of the country.
>
> The writer is acquainted with a method of keeping hen house water pipes from freezing, by wrapping them with a wire, which is later electrically charged, and we are wondering whether this method, or a stronger chemical melter is in use anywhere else."

The difficulty would arise when the sun hit the roof and melted the snow and ice on it. The water then would run into the downspout leader or conductor which was out of the sun's rays and would freeze therein. Ultimately the water would overflow and cause icicles to form. These would be particularly dangerous in a downtown location where the icicles would overhang the sidewalks or alleys and we know that

Mr. Schwarz would appreciate any information or personal experiences that you might be able to give him.

New Waterproofing (?) Methods

Many new methods of "waterproofing" basements are appearing on the market. Some of them are undoubtedly excellent for particular applications. Others may be open to question under most circumstances.

It is important that the property manager determine whether the difficulty is condensation, periodical heavy rain seepage, or pressure seepage from high ground water level. What may be highly successful under the second circumstance might not be at all satisfactory under the last.

Before a decision should be made which would cost a large amount of money, it is suggested that the property manager check other installations personally with the owner. Sad experience has taught that it is not always wise to be the first experimenter in the locality.

Warning— Fabric Coatings

Also becoming popular with local inventors are fabric coatings to seal the fibers so that stains cannot permeate. The fabric can then be washed or wiped off with a damp cloth.

Our own experience with these fabric coatings is limited to a very short trial period but has been long enough to see a distinct disadvantage and danger in ordinary applications.

The solvent used in these fabric coatings is very commonly highly inflammable and may even be explosive in certain circumstances. Application should, therefore, be done outside and away from any structure, and the necessity for insurance arrangements is obvious.

Employee Appearances

If a picture is worth a thousand words, the two on this page should certainly show the difference in the impression a tenant can get from the sloppy and the neat janitor or maintenance man. Every property manager can decide for himself the type he would want and the type he has. The methods for correcting deficiencies are known to all property managers. In these days when public relations is paramount in the minds of the public, it is even more important than ever that the critical eye of the tenant be pleased.

New Aluminum Paint

We, like many other property managers, have long suspected that good paint was good paint; that all formulas for good paint were reasonably similar; and that the best method of purchasing paint was to buy it from a reputable manufacturer and please the painter. A new booklet, published by

the Aluminum Company of America, called "Recent Developments in Ready Mixed Aluminum Paint" has proved, therefore, refreshingly different.

The durability and effectiveness of aluminum paint is dependent upon the leafing characteristics of aluminum flakes. To create a good finish, maximum heat reflection, and durability, good leafing is a necessity. When linseed oil fatty acids are used as a vehicle, leafing is destroyed very quickly. Improper metallic dryers will create the same result. The surface tension of the vehicle is affected by use or misuse of thinners. Moisture content may not only cause leaf deterioration but may result in development of pressure within the container so high that the cap will be blown off. These are but few of the items brought out in the pamphlet.

Large purchasers of aluminum paint in any of its three major forms should write to the Aluminum Company of America, 520 North Michigan Avenue, Chicago, Illinois, asking for their pamphlet as named above, by Robert I. Wray.

Concrete Stain Removal

To add to your collection of maintenance information, we suggest you send to the Portland Cement Association, 33 West Grand Avenue, Chicago 10, Illinois, for their paper, ST 19, "Removing Stains from Concrete."

The removal of stains from concrete is often a time consuming job and information on the quickest method will reduce the labor cost considerably. Included in the list of removable stains are: Iron, copper, bronze, aluminum, ink, urine, fire, lubricating oil, coffee, iodine, perspiration, rotten wood and general service stains.

The processes cover solvents, pastes, and poultice methods.

Spring is the Time to - - -

1. Landscape.
2. Check exterior of building for any needed repairs.
3. Spring house clean—fabrics, rugs, and entryways.
4. Decorate. Decorating now means clean apartments and offices all summer and fall in comparison to fall decorating which will immediately compete with winter soot.
5. Use dog repellants on shrubbery.
6. Oil squeaking doors. (7 out of 10 do)

Help Wanted !!

Maintenance forms, maintenance employee regulations, and maintenance letters to tenants are wanted by this column for publication. Many property management firms have written letters to tenants or have had printed forms made up which are sent with the lease covering maintenance problems. Check lists and regulations for employees, purchase bid sheets, and other forms are also quite common.

This column will start publishing examples of these items in the near future. Short items will be included within the column itself. Longer items will be made the basis of separate articles. We'd appreciate examples from your office.

WHAT TO READ

By *C. M. Jones*, EDITOR

Pertinent Comments on Books, Recent Surveys, and Articles of Interest to Property Managers

Book Reviews

LAND ECONOMICS by ROLAND R. RENNE. New York, Harper & Brothers, 1948. pp. 736, $5.00.

REAL ESTATE ANALYSIS by WILLIAM H. HUSBAND and FRANK RAY ANDERSON. Chicago, Richard D. Irwin, Inc., 1948. pp. 576, $5.00.

Both of these books have something in common and for that reason they are being considered together rather than separately. Their similarity is one of approach to subject matter. In both instances the authors are concerning themselves with material which has been the subject of numerous books in the past. What makes these two books so interesting is the attitude or the point from which these men have approached their material. The subject of land economics, as Dr. Renne so effectively points out, is no longer a national concern but is a matter of international importance. So he has approached his subject and considered its aspects and principles in light of this new attitude.

For a long time real estate was considered a local phenomenon but recent events have proved this attitude to be false and in reality it is a national concern, and in some phases a national problem. Mr. Husband and Mr. Anderson have re-appraised the basic principles and functions of real estate in the light of this new attitude.

Land Economics is Dr. Renne's studied analysis of one of the most urgent problems facing the world—the utilization of land. His book is the outgrowth of nearly twenty years devoted to the study and teaching of land economics, especially agricultural economics.

The subtitle of Dr. Renne's book tersely states its purpose and coverage; the principles, problems and policies of utilizing land resources. The book opens with a statement of the background and perspectives of land economics in which the importance of the role played by land in our economic, social, and cultural life is pointed out.

Part II of the book is devoted to an analysis of the basic economic principles and social processes involved in the utilization of land as they function under our present system of property rights.

Part III sets forth and discusses the seven major uses of land: agricultural, forest, recreational, mineral resources, water resources, transportation, and urban. This section provides a factual basis for a comprehensive understanding of land utilization patterns and the competition of land uses in producing economic goods and services.

Part IV is concerned with land use problems and policies as they relate to such subjects as land tenure and tenancy, valuation and credit, taxation, conservation. Dr. Renne has treated these subjects in a sepa-

rate part of his book rather than as part of the discussion of the various land uses in order to emphasize the economic and social problems associated with land utilizations.

The last section of the book, Part V, is devoted to an analysis of planning and control of the use of land in the interests of improving the quality of human living. In this section of the book Dr. Renne sets forth his ideas and theories as to the solution of new problems affecting the various aspects of land economics brought about by recent economic and social changes, pointing out that any solution to the question of the usage of land must take into consideration the ability to improve human living conditions.

This is a valuable and timely book. While it is of particular interest to those who are concerned with the problems of soil conservation, land reclamation and farm credit, it has its significance for all those concerned with real estate in the national, and international economy.

Real Estate Analysis is a very interesting book by two authors new to the real estate literature field. They have produced a book on the fundamentals of real estate by approaching the subject from a different angle. This discussion of subject is quite refreshing and it would seem that basic principles and practices which have become so familiar take on a new significance and importance. This does not mean, however, that truth or logic has been sacrificed in order to do something different. While the authors are government men—Mr. Husband being General Manager and Mr. Anderson, Assistant General Manager of the Federal Savings and Loan Insurance Corporation—the study appears to be a very fair and impartial statement.

In this book the authors have discussed the underlying principles in the light of changes in thought patterns brought about by events on the economic, political, and social world scene. The authors feel that real estate should be considered as a national concern rather than as a local business enterprise.

The book is divided into five major sections in which the subject matter is discussed with a considered balance between the basic principles involved and actual operation. Using such an approach, Part I, Real Estate and the Economy, is an analysis of such matters as property rights and the social order; real estate and the national economy; real estate and the city; land and its development; building and its problems.

Part II, Legal Processes and Instruments, covers such subjects as property interests and titles, mortgages, deeds, contracts, and leases. Part III offers an interesting approach to the subject of "The Real Estate Market," first by analyzing the nature of such a market, by discussing price fluctuations and real estate cycles. There is a chapter on the value of real estate as well as one on real estate appraisals.

Part IV, The Financing of Real Estate, opens with a discussion of financing and risks goes on to cover loans and terms as well as the sources of capital. This is one of the best sections of the book as it brings into the discussion of real estate financing many factors and ideas not usually found in a book of this type. For example, the chapter devoted to real estate financing and risks covers such topics as the amount of mortgage debt, equity and borrowed capital, the end risk of real estate financing, equity financing in practice, the interest rate, analysis of personal risks, the property risk, the economic risks.

The last part of the book, Part V, The Public Interest, discusses real estate as a matter of public interest, taking into consideration such matters as taxes and assessments; eminent domain and condemna-

tion; planning and zoning; public housing: and public policy and private interest.

Article Reviews

There's Profit in Old Estates

Here's an idea for increased management business which takes the investment of some capital and time, in the beginning, but pays off in the end. This article describes an old Hudson River Estate which was bought for $65,000 complete with three mansions, a large pond, much lawn and a glorious view. A modernization program costing $200,000 transformed the estate into 21 modern apartments of 90 rooms with an annual rent toll of $40,000. This means a 15 per cent return on a long-term investment.

The article gives before and after pictures of the exterior, as well as floor plans.

The sponsor of the project is Walter Kocher, a Swiss watch manufacturer and Robert Green, architect builder.

Full details on materials and equipment used in the remodelling are given. *National Real Estate Journal,* May 1948, pp. 24-25.

What's Ahead in Cleaning?

What are the present trends? Are buildings being cleaned better than they were cleaned during the war years? More cleaning help available? Is the help any more efficient? Are buildings offering any services now that they did not provide during the war? How are buildings most likely to improve their service to tenants during the next year or two?

This article gives the best information to be gleaned from months of study of cleaning routines and operating practices of representative office and commercial buildings in all parts of the country. *Buildings,* April 1948, pp. 31-33.

What does your Letter Head tell about you?

Your letter head can be an important selling point for your firm, but it must be attractive and carry certain basic information.

Do your letter heads reflect the stability and progressiveness which has made your firm successful?

Do they represent your firm as would a neat, personable salesman?

This article goes into typographic, paper, illustration, slogans, color and arrangement. *National Real Estate and Building Journal,* May 1948, pp. 33-37.

The *Architectural Forum* of May, 1948 is entirely devoted to plans for 40 stores.

Many exterior and interior views are given, together with floor plans and sketches.

Information on Store Fronts is also included.

This issue will be extremely helpful to the Property Manager with store remodelling problems.

New Certifications

Institute of Real Estate Management

The title of "Certified Property Manager" has been conferred upon the following individuals by the Institute of Real Estate Management.

(See pages 225 to 235 inclusive, for a complete list of Certified Property Managers.)

WALTER E. YOUNG,

Oakland, California.

Born, Contress, Arizona, October 8, 1898; operates his own real estate office; 30 years' experience in real estate management; has specialized in estate properties and residential and income buildings; majored in economics at University of Nevada for two years and at the University of California one and one half years; professional territory covers Oakland, Alameda, Berkeley, Emeryville, Piedmont, Albany and San Leandro.

LLOYD D. HANFORD,

San Fransico, California.

Born, San Francisco, California, June 29, 1901; has operated own real estate firm since 1924; 23 years' experience in managing apartment, loft and multi-tenant commercial buildings; experience also includes building construction; secured A.B. degree in chemical engineering, University of California; veteran, World War II; principal business connections include Angelo California National Bank, San Francisco Bank, Buckbee Thorne & Co., M.C. Nathan, Dalziel Company; professional territory covers the San Francisco Bay area.

J. A. WEINBERG, Jr.,

Washington, D.C.

Born, Manning, South Carolina, May 23, 1909; president, J. A. Weinberg Company, Inc.; eight years' experience in management of stores, apartments, loft and office buildings; 15 years in general real estate; received an A.B. degree from Washington & Lee University; member, American Institute of Real Estate Appraisers; member, Society of Residential Appraisers; professional territory covers Washington, D. C. and its metropolitan area.

E. M. CHAPMAN, Sr.,

Atlanta, Georgia.

Born, Atlanta, Georgia, 1887; has owned and operated Chapman Realty Company for the past 20 years; specializes in the management of commercial properties, apartments, small office buildings and investment properties; past president of Atlanta Real Estate Board; professional territory covers Fulton County, Georgia.

WILLIAM A. CREMIN,

Chicago, Illinois.

Born, Chicago, Illinois, August 28, 1912; general partner, Cremin & O'Connor since 1936; director, Amberg File & Index Co., Kankakee; director, Porter Manufacturing Co., Chicago; experience in property management includes apartment and industrial loft buildings; graduated from Princeton University with A.B. degree; served in the U. S. Navy (1942-6); member, Chicago Mortgage Banker's Association, Chicago Board of Underwriters; professional territory covers the north and near north side of Chicago.

ERWIN C. FEURER,

Chicago, Illinois.

Born, Marion, Illinois, December 11, 1907; office manager, Floyd G. Dana & Co.; member, board of directors, Evangelical Hospital of Chicago; secretary, South Side Renting Men's Association; seven years' experience in the management of apartment and commercial properties; spent 12 years with Chicago Title and Trust Company; professional territory covers the south side of Chicago.

JEROME A. MARTIN,

Chicago, Illinois.

Born, Chicago, Illinois, July 4, 1906; partner, Peter F. Reynolds Co.; 17 years' experience in the management of elevator- and walk-up-apartment buildings; attended Northwestern University; member, Chicago Real Estate Board, Northside Real Estate Board, and Apartment Owners and Managers Assn.; professional territory covers Chicago and vicinity.

MILTON M. WORSEK,

Chicago, Illinois.

Born, Chicago, Illinois, April 5, 1904; owner, Milton M. Worsek and Company established in

1933; 21 years' experience in property management, brokerage and leasing; obtained B.S. degree from Northwestern University; land valuator and business property appraiser, Cook County assessor (1930-31); has served on the Board of Governors, Management Division and Appraisal Committee of the Chicago Real Estate Board; held office of secretary (1940-41), treasurer (1943-44), and vice president (1947-48) of the North Side Real Estate Board; member, Northwest Side Real Estate Board; member, Chicago Board of Underwriters; professional territory covers the north and northwest sides of Chicago.

CARL R. RACKOW,

Oak Park, Illinois.

Born, Chicago, Illinois, May 21, 1903; partner, C. E. Rackow & Co.; 11 years' experience in property management specializing in three-story apartment buildings; experience also includes 15 years as a carpenter and building construction superintendent; member, Southern Business District Assn., Illinois Savings & Loan League, Oak Park Real Estate Board; professional territory covers Oak Park and Austin.

DONALD C. CORNELIUS,

Rockford, Illinois.

Born, Rockford, Illinois, November 23, 1914; for the past thirteen years has been actively engaged in the real estate business, during the last seven of which he has owned and operated a real estate, management, and insurance business; specializes in the management of apartment buildings, store buildings, and residences; is a member of Rockford Chamber of Commerce and Junior Association of Commerce, Natl. Inst. of Real Estate Brokers, and at present is the president of the Rockford Real Estate Board; professional territory covers Rockford and environs.

W. GEROULD CLARK, Jr.,

Englewood, New Jersey.

Born, Tenafly, New Jersey, January 12, 1904; president and owner, W. Gerould Clark, Inc. since 1936 (prior to August 1944 firm name was Charles T. Lansing, Inc.); associated with Watson G. Clark, Inc. until 1935 as a licensed municipal engineer and land surveyor; served as borough engineer of Closter, New Jersey, 1932-34; most of his 12 years' experience in property management has been in handling apartment buildings and one-family residences; attended Cornell University for two years; former president, Englewood Rotary Club; former president, Eastern Bergen County Real Estate Board; secretary of the Bergen and Passaic Chapter, Society of Residential Appraisers; serves as real estate expert and Councilman-at-Large for the City of Englewood; professional territory covers eastern Bergen County, New Jersey.

LUTHER H. KENDALL,

Buffalo, New York.

Born, Buffalo, New York, January 11, 1900; property manager, Saperston Real Estate Co.; formerly associated with Farmers & Mechanics Savings Bank, Lockport, New York, managing all types of real estate; now specializes in commercial and industrial property; 17 years' experience in property management; received B.S. degree, University of Pennsylvania; member, Greater Buffalo Advertising Club; professional territory covers Buffalo and vicinity.

ROBERT H. ARMSTRONG,

New York, New York.

Born, New York, New York, November 29, 1900; formerly senior partner of Armstrong and Armstrong (1927-1946), now senior partner, Armstrong Associates; director, New York Building Congress; director and member, executive committee, National Committee on Housing; trustee, The Town Hall; vice president, Technical Valuation society; vice president, Metropolitan New York Chapter, American Institute of Real Estate Appraisers; fellow, Royal Economic Society; member, American Economic Association, American Statistical Association, and Econometric Society; editor-in-chief, *The Appraisal Journal*; received A.B. degree from Columbia University; has lectured on economics and valuation at the University of Pennsylvania, Columbia University, New York University, and Cornell University; author of numerous articles and books on the economics of real estate; 27 years' experience in property management specializing in office, apartment and loft buildings, warehouses and factories; professional territory covers all parts of the United States.

DOMINICK DI GIACOMO,

New York, New York.

Born, New York, New York, November 26, 1918; associated with Arthur Eckstein, Inc. as property manager and for over two years as assistant in the appraisal department; eight years' experience in property management specializing in business and residential properties; obtained a B.S. degree from New York University; served for three years in U. S. Army; assistant instructor in real estate management course given at Walter Hervey Junior College, New York; professional territory covers New York City.

JACK N. OPPENHEIM,

New York, New York.

Born, New York, New York, May 13, 1903; associated for the past 12 years with Arthur Eckstein, Inc.; has been in the real estate business for 22 years and in property management for 12 years; specializes in management of loft and office buildings; graduated from New York University with B.S. and LL.B. degrees; serves as instructor at the City College of New York on real estate investments and finance; professional territory covers New York City.

LEONARD M. FISHEL,

Lima, Ohio.

Born, Lima, Ohio, June 4, 1918; vice president and treasurer of The Michael-Fishel Co. (real estate) and Michael & Fishel, Agents (insurance); engaged in the real estate management and insurance fields since 1938; experienced primarily in the management of apartment buildings and storerooms; attended Ohio State University for two years; served in the U. S. Army Air Force for three and one-half years; professional territory covers Lima and vicinity.

GEORGE B. HETRICK,

Lancaster, Pennsylvania.

Born, Lancaster, Pennsylvania, March 25, 1894; for the past year has operated a real estate and insurance business in his own name; formerly, for 30 years, was associated with Engle & Hambright, Inc. as secretary and director of the corporation; 25 years' experience in real estate management handling single-family residences, retail stores and manufacturing buildings; former contract manager for FHA in Lancaster; past president, Real Estate Board of Lancaster; past director of Lancaster Chamber of Commerce and Boys Club; professional territory covers the city of Lancaster and Lancaster County.

R. GLENN YOUNG,

Chattanooga, Tennessee.

Born, Trion, Georgia, October 15, 1884; has been associated with Real Estate Management, Inc. as vice president in charge of management for five years; formerly for six years handled defaulted real estate loans of American Trust and Banking Co., Chattanooga; for four years owned and operated a real estate office handling both management and sales; his 15 years' experience in the real estate field includes the management of commercial properties, single-family dwellings and apartment buildings; professional territory covers Chattanooga and vicinity.

C. P. SLEDGE,

Houston, Texas.

Born, Rockwall County Texas, July 15, 1887; owner, Sledge Realty Company established in 1935; has been in the real estate field for 27 years; his 12 years' experience in property management has included the operation of single-family residences, commercial and apartment buildings; former contract manager for HOLC; presently handling properties for PHA; experience also includes nine years in general insurance business; professional territory covers primarily the northern section of Houston.

PARKER P. ROBINSON,

Salt Lake City, Utah.

Born, Fillmore, Utah, April 9, 1893; general manager of Zions Securities Corp. since 1935; formerly for seven years operated the Melville-Robison Company handling real estate principally in Millard County; 28 years' experience in property management including hotels, apartment, office, mercantile and industrial buildings, service stations, farms and estate properties; experience also includes 22 years in the banking field; director, Salt Lake Real Estate Board; director and now president, Apartment House Association of Utah; served eight years as a Bishop in the Church of Jesus Christ of Latter-Day-Saints (Mormon); professional territory covers principally Utah and Hawaii; also handles a small business in California, Arizona, Idaho, Wyoming and Nevada.

EMANUEL E. FALK,

Newport News, Virginia.

Born, Newport News, Virginia, July 23, 1904; partner since 1938, Drucker & Falk; secretary-treasurer, Southampton Apts., Inc.; secretary-treasurer, Bondale Corporation; president, Industrial Metals Protective Inc. of Virginia; formerly for 12 years was associated with Morton G. Thalhimer, Inc. in Richmond, Virginia; 22 years' experience in the real estate field and property management specializing in the management of stores, single-family residences, and apartment buildings; attended the University of Virginia for two years; member, American Institute of Real Estate Appraisers; professional territory covers the state of Virginia.

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† (See pages 225 to 235, "Roster of Members" for addresses.)

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Charles B. Rice (741).....18 Asylum St.
Albert M. Rome (205).....11 Asylum St.

New Haven
Amos G. Hewitt (402).....205 Church St.
James D. Kauffman (206)....152 Temple St.

South Norwalk
John M. Glover (238).....6 Webster St.

Stamford
Richard W. Fitch, Jr. (403)....P. O. Box 162

Waterbury
John M. Hutchinson (138)....195 N. Main St.

DELAWARE

Wilmington
Arnold Goldsborough (562)....9 E. 12th St.
Emmett S. Hickman (211)..203 W. Ninth St.

DISTRICT OF COLUMBIA

Washington
Richard L. Boss (599)..1321 Conn. Ave., N. W.
J. Wesley Buchanan (557)..1732 K St., N. W.
Wesley E. Buchanan (825)..1732 K St., N. W.
George M. Carpenter (616).....
927 15th Street, N. W.
Lewis F. Colbert (527).....1931 K St., N. W.
D. Page Cornwell (826)..739 15th St., N. W.
James Crane (790).....1614 K Street, N. W.
Raymond D. Evans (564).....
925 N. Y. Ave., N. W.
Roy G. Fristoe (432)....1013 15th St., N. W.
William N. Grimes, Jr. (472).....
15th and Pennsylvania Aves.
Henri P. Henry (286).....
1321 Connecticut Ave., N. W.
Robert T. Highfield (287).....
1406 M St., N. W.
Howard F. Humphries (326).808 N. Capitol St.
Frank J. Luchs (4).....1505 H St., N. W.
Earl M. Mackintosh (210)..Washington Bldg.
William McAinsh, Jr. (916).....
1200-15th St., N. W.
F. Moran McConihe (566).....
1321 Conn. Ave., N. W.
Henry W. Morgan, Jr. (567).....
201 Southern Bldg.
Edward T. Offutt, Jr. (327)..1505 H St., N. W.
Russell C. Parsons (917).....
Washington Building

Herbert M. Pasewalk (328)..... 303 Seventh St., N. W.
Nathan Poole (277).....1737 K St., N. W.
Ross L. Totten (568).....900 F St., N. W.
James E. Tucker (918)..3515-14th St., N. W.
J. A. Weinberg, Jr. (961)..1707 H St., N. W.
Carey Winston (569).....739 15th St., N. W.
Tighe E. Woods (281) Office of Housing Expediter.....18th and Constitution

FLORIDA

Jacksonville

Richard D. Barker (528)..113 E. Forsyth St.
Edward Dwelle, Jr. (448)..113 E. Forsyth St.
Norman C. Edwards (870)..... 1814 Hendricks Ave.
Mal Haughton, Jr. (141).....108 W. Bay St.
George R. Mason, Jr. (239)...P. O. Box 4637

Miami

A. T. Beckwith (827).....19 W. Flagler St.
William G. Heck, Jr. (828)..19 W. Flagler St.
Fuller L. Kendrick, Jr. (829)..... Dade Commonwealth Title Co., Amer. Bk. Bldg
Kenneth S. Keyes (5).....19 W. Flagler St.
Charles A. Post (742).....151 N. E. 3rd St.
Theodore W. Slack (696)..730 Ingraham Bldg.
H. H. Trice (800).....144 N. E. 2nd Ave.

Miami Beach

David R. Isen (830).....420 Lincoln Rd.

Neptune Beach

Norman A. Minchew (877)....217 First St.

Orlando

Frank S. Crebs (878).....507 Metcalf Bldg.
S. M. Heasley (506)....15 W. Washington St.

Passagrille Beach

George C. Roughgarden (831)..... 2506 Passagrille Way

St. Petersburg

Weyman Willingham (329)..... 409 Florida Power Bldg.

Tampa

Carlton C. Cone (248)....442 W. Lafayette St.
Julian W. Cooper (61).....Box 29
Jay L. Hearin (6).....Box 2048
M. H. Mabry (93).....Box 1320
L. F. Pallardy (558).....Box 1952
Henry E. Smoak (832)....1219 S. Howard Ave.

West Palm Beach

J. E. Hollenbeck (94).....108 S. Olive Ave.
L. M. Studstill (144).....108 S. Olive Ave.

GEORGIA

Atlanta

Alvin B. Cates (697).....201 Hurt Bldg.
E. M. Chapman, Sr. (968)..... 71 Forsyth St., N. W.
John F. Clegg (433)..547 Peachtree St., N. E.
H. W. DiCristina (833).....P. O. Box 2090
Morris M. Ewing (271)..65 Forsyth St., N. W.
W. J. Hogan, Jr. (145)..... 141 Carnegie Way, N. W.
Paul C. Maddox (272)....506 Standard Bldg.
W. R. Otis (908)..820 Rhodes-Haverty Bldg.
Frank C. Owens (7).....521 Grant Bldg.
Wister A. Sharp (919)..... 39-41 Forsyth St., N. W.
G. M. Stout (920)..39-41 Forsyth St., N. W.
Boyd F. White (834).....521 Grant Bldg.
Ward Wight (146).....202 Healey Bldg.

Augusta

Adrian B. Sherman (62).....133 Eighth St.

Macon

William G. Hardeman (449).563 Mulberry St.
Thad E. Murphey (570).....470 Cherry St.
Thomas E. Turner, Jr. (879).564 Mulberry St.

Savannah

Henry Lee Brown (801).....14 Bryan St., E.
Robt. P. Constantine (651)....22 E. Bryan St.
Robert J. Dotson (768)..... Cor. Bryan & Whitaker
Herbert F. Gibbons (802).....5 York St., E.
Thomas C. Helmly (698).....7 Bull St.
Samuel Hornstein (767).....8 West State St.
O. P. Jenkins (803).....11 York St., E.
William F. Lynes, Jr. (652)....31 Drayton St.

ILLINOIS

Aurora

Herman C. Offutt (699).....15 Island Ave.

Carbondale

I. W. Dill (89).....217 W. Main St.

Chicago

Abram L. Alcorn (330)....16 N. Dearborn St.
Arthur L. Anderson (434)..7 S. Dearborn St.
Warner G. Baird (836)..215 N. Dearborn St.
Robert B. Bell (858)..4046 N. Keystone Ave.
John C. Bowers (147).....4628 Broadway
Kendall Cady (126).....38 S. Dearborn St.
James J. Carroll (148).....1355 E. 53rd St.
John F. Cary (435).....7 S. Dearborn St.
William A. Cremin (951)....33 N. LaSalle St.
Martin A. Culhane (743).....4545 Broadway
James C. Downs, Jr. (1)..38 S. Dearborn St.
John McMullen Ducey (367)..343 S. Dearborn
Charles William Ehrat (77)..... 3180 Sheridan Rd.
William Everett (837)..919 N. Michigan Ave.
Erwin C. Feurer (969).7465 S. Vincennes Ave.
Tom Fleming (838)....919 N. Michigan Ave.
James E. Gallagher, Jr. (285)..461 E. 111th St.
John H. Hagerty (90).....157 E. Erie St.
John L. Hall (839).....2618 Peterson Ave.
Henry T. Holsman (78).....1501 E. 57th St.
George W. Kemp, Jr. (805)..1172 E. 63rd St.
Ferd Kramer (212).....16 N. Dearborn St.
Fred M. Lorish (8).....1355 E. 53rd St.
Jerome A. Martin (952).2000 Lincoln Park W.
Edwin H. Melone (347)....5637 W. Lake St.
Donald F. Moore (880)....7748 Ashland Ave.
Richard Lawrence Nelson (404)..... 38 S. Dearborn St.
John S. Pemberton (881)..3180 Sheridan Rd.
Leslie M. Price (921)..6826 Stony Island Ave.
Frank G. Reynolds (405)..500 N. Dearborn St.
Harold J. Rieger (859)..500 N. Dearborn St.
Bert V. Robins (617).....Gordon Strong Co., 209 S. State St.

Ralph J. Silverwood (700)..1505 East 67th St.
Percy E. Wagner (348)..6236 Cottage Grove
Jerome A. Weitzel (882)..411 Blackhawk St.
Milton M. Worsek (953).....
4007 W. Lawrence Ave.

Evanston
William O. Campbell (415)....12 Milburn Pk.
Archibald G. Jennings (860).....
1571 Sherman Ave.

Oak Park
Whitney W. Bowers (406)..1043 South Blvd.
David D. Decker (349).....1119 Pleasant St.
Sanborn O. Houser (350)....1026 North Blvd.
Carl R. Rackow (954)...834 S. Oak Park Ave.
Thomas A. Sumner (840)..429 N. Marion St.

Peoria
Martin T. Butler (871)....101 S. Adams St.
William W. Elsesser (791).308 Lehmann Bldg.
David L. Keith (861)...First Natl. Bk. Bldg.

Rockford
Donald C. Cornelius (955).Blackhawk Building

INDIANA

Anderson
A. L. McKee (701).....
1605 Euclid Dr., Elmhurst

Gary
Kenneth A. Parmelee (862)....569 Broadway

Indianapolis
Berkley W. Duck, Jr. (841)..251 N. Delaware

South Bend
George R. Jones (842)..230 W. Jefferson Blvd.
Marlin Miller (369).....1101 Bellevue
R. Park Wickizer (572).230 W. Jefferson Blvd.

Valparaiso
Harry A. Chetham (804).....7 Lincoln Way

IOWA

Council Bluffs
Bruce P. Baker (667).....21 S. 6th St.
John B. Wadsworth (668).....136 S. Main
Paul E. Weaver (669).....550 Mynster

Des Moines
Ralph L. Jester (313).....209 Fleming Bldg.
Arthur S. Kirk (129).....507 9th St.

KANSAS

Dodge City
L. F. Meyers (618).....503 First Avenue

Hays
A. F. Bieker (619).....709 Main St.

Ness City
Vyrl W. Levan (620).....P. O. Box 55

Topeka
Howard Lyngar (702)....New England Bldg.
David Neiswanger (124)....New Eng. Bldg.

Wichita
Hobart C. Brady (370)....1002 Bitting Bldg.
Melvin M. Williams (288).....
Wheeler Kelly Hagny Bldg.

KENTUCKY

Covington
E. J. Legg (573).....601 Madison Ave.

Louisville
Harry W. Goodman (10).....
601 Louisville Tr. Bldg.

LOUISIANA

Baton Rouge
J. Russell Doiron (600).....Box 218

New Orleans
George Danziger (883).....822 Union St.
Stanley M. Lemarie (734)..829 Union Street
J. Wallace Paletou (371).....310 Carondelet
W. J. Villarrubia (691).....812 Perdido St.
F. Poche Waguespack (884)..812 Perdido St.

MARYLAND

Baltimore
N. Stanley Bortner (507)..912 Keyser Bldg.
Wallace H. Campbell (807)..4810 Roland Ave.
George M. Hampson (79).....
1602 Munsey Bldg.
Charles H. Hurley (289)....4810 Roland Ave.
Edward F. Lyman (511)....909 N. Charles St.
William J. Martin (473).....
100 W. Uni. Parkway
John McC. Mowbray (922)..4810 Roland Ave.
Peyton B. Strobel (372)..2206 N. Charles St.
E. Randolph Wootton (808)..701 Cathedral St.

MASSACHUSETTS

Boston
James H. Alphen (529).....31 State St.
Watson G. Cutter (95).....84 State St.
William H. Dolben (499)..161 Devonshire St.
Basil Gavin (450).....8 Newbury St.
Ralph T. Horn (575).....79 Milk St.
Carleton Hunneman (362)....5 Arlington St.
J. Howard Loughman (96)....10 P. O. Square
F. Paul Morgan (250).....45 Milk St.
John Nordblom (97).....50 Congress St.
Robert C. Nordblom (12).....50 Congress St.
William Pease O'Brien (458).....10 State St.
Lorin D. Paine (213).....31 State St.
James Mason Rothwell (98).....
107 Massachusetts Ave.
Joseph C. Skinner (574).....50 Congress St.
Frank R. Sylvester (704)....50 Congress St.
Frederick Wayland (531).....
1970 Commonwealth Ave.

Brighton
James M. Bowler (705).....
1568 Commonwealth Ave.
Henry G. Kiggen (530).....
1568 Commonwealth Ave.
Harold L. Niles (500).....
1568 Commonwealth Ave.

Brookline
William H. Dyer (71).....1318 Beacon St.
Clifford V. Miller (13).....1394 Beacon St.
Benjamin A. Richardson (100).....
1394 Beacon St.

Abraham M. Sonnabend (508).1870 Beacon St.

Cambridge

Leslie C. Read (653).....18 Brattle St.
E. Burbank Saul (763).689 Massachusetts Ave.
Edward S. Stimpson (532)....185 Albany St.

Lexington

Donald D. Hathaway (291).....84 Shade St.

Lynn

Charles W. Turner (14).....56 Central Ave.

Mansfield

Francis Lincoln Buswell (290)..41 Benefit St.

Somerville

Harry A. Gilbert (15).....385 Broadway
Edward G. Pyne (654).....385 Broadway

Springfield

Henry M. Clark (101).....100 Broadway

MICHIGAN

Battle Creek

Charles V. Perrett (885).46 E. Michigan Ave.

Detroit

Howard Bliss (292).....600 Dime Bldg.
Lee Builta (923).....300 Lafayette Bldg.
Issac Jacob Cohen (150).....
3711 Woodward Ave.
Frank A. DeBoos (621).....1015 Ford Bldg.
John A. Dodds (16)....Suite 518, Buhl Bldg.
Kenneth Draper (706).....530 Shelby St.
T. H. Evans (209).....15818 Puritan Ave.
Thomas J. Fitzgerald (314)....530 Shelby St.
William Gerhardt (752)..2100 Barlum Tower
Walter Guibord (670).....3600 Book Tower
William C. Haines (293)..176 E. Grand Blvd.
Lewis H. Haskins (152)....1009 Ford Bldg.
Jerry C. Hayes (707)....520 Hammond Bldg.
Richard S. Hickey (863)..211 W. Congress St.
H. P. Holmes (63).....416 Hammond Bldg.
Frank A. Howes (397)....748 Free Press Bldg.
Donald D. James (215)..700 Penobscot Bldg.
James C. Johnston (153)..1333 Majestic Bldg.
Frank T. King (154).....527 Majestic Bldg.
William G. Kirby (708).....
500 Michigan Bank Bldg.
S. Fred Pack (709).....1432 Dime Bldg.
Norman C. Scudder (459).....
1780 Penobscot Bldg.
Lee K. Silloway (18)....8th Floor, Buhl Bldg.
John S. Spencer (155)....416 Hammond Bldg.
William Wright Tanney (711).....
614 Hammond Bldg.
Clarence W. Treadwell (576).....
1002 Lafayette Bldg.
Robert W. Treadwell (407).....
1002 Lafayette Bldg.
R. Bliss Wolfe (623).....Lafayette Building

E. Lansing

Albert L. Ehinger (577)..124 W. Grand River

Flint

Claude O. Darby (373).301-5 F. P. Smith Bldg.
George C. Kellar (261)....304 Sherman Bldg.

Mark H. Piper, Jr. (659).....
602 F. P. Smith Bldg.

Grand Rapids

Silas F. Albert (156).....500 Keeler Bldg.
Robert J. Ogden (501).....
906 Peoples Natl. Bank Bldg.

Lansing

Emil E. Gallas (771).....123 S. Grand
Edward G. Hacker (19).....
221½ W. Washtenaw St.
Russell F. Phillips (398)..520 S. Washington
William Joseph Porter, Jr. (157).....
904 Prudden Bldg.
C. Rowland Stebbins (20).....
124 N. Washington Ave.

Muskegon

Harvey I. Nedeau (294)..Jefferson at Webster

Pontiac

Kenneth G. Hempstead (864).102 E. Huron St.
Floyd Kent (502).....24 West Lawrence St.

MINNESOTA

Duluth

Bert L. Struble (671).....230 W. Superior

Minneapolis

Fred L. Chapman (208)..519 Marquette Ave.
Maurice Engler (672)....400 First Ave., N.
Edward W. Kellogg (592).519 Marquette Ave.
E. R. Price (64).....612 Second Ave., S.
James R. Thorpe (65)....519 Marquette Ave.
John B. Welch (924).....2415 Third Ave. S.

MISSISSIPPI

Jackson

Leon T. Rogers (21).....Box 486
Swep S. Taylor (792).....
201 Deposit Guaranty Bk. Bldg.

MISSOURI

Joplin

Charles E. Byrd (712).214½ West Fourth St.

Kansas City

George F. Akright (675).....Victor Bldg.
Byron G. Bliss (351).....404 Fidelity Bldg.
George M. Bliss (103).....921 Walnut St.
Harold W. Brown (692)....200 Victor Bldg.
William J. Campbell (744)..300 Bryant Bldg.
John F. Campion (713).....2 East 39th St.
David B. Childs (352).....509 Victor Bldg.
Charles F. Curry (158)....921 Baltimore Ave.
Marvin C. Holmes (843)....1801 Grand Ave.
Lewis Kitchen (714).....928 Grand Ave.
J. Ward McPherson (578)..Land Bank Bldg.
W. Herbert Myers (886)....1004 Grand Ave.
Arnold Norman (461)....909 Baltimore Ave.
Carl Ragsdale (542).....200 Temple Bldg.
Carl B. Rechner (295).....1002 Walnut St.

Raymond K. Sheriff (509)....1002 Walnut St.
Lowell Goodman Simonds (251).....
409 Dwight Bldg.
William R. Stanley (375)....1002 Walnut St.
Woodford C. Taylor, Jr. (376).....
1002 Walnut St.
Earl K. Townsdin (624)....212-14 E. 10th St.
Robert W. Tureman (593).....
1319 Commerce Bldg.
Frank L. Woodward (660).....
114 W. 10th St. Bldg.

St. Joseph

William C. Barrow (625)..816 Frederick Ave.
Howard R. Sisson (716).....708 Francis St.

St. Louis

William F. Baggerman (315).....
5330 Delmar Blvd.
H. L. Cornet, Jr. (296).....719 Chestnut St.
Ralph F. D'Oench (252)..3932 Lindell Blvd.
Carol V. Laux (463).....4658 Gravois Blvd.
Louis Maginn (22)..Rm. 1118, 721 Olive St.
F. B. Martin (745).....224 N. 4th St.
Elliott S. Miller (23).....317 N. 11th St.
E. W. Salisbury (368).Rm. 1118, 721 Olive St.
Ralph Stevener (673)....3658 W. Pine Blvd.
Clarence M. Turley (693).....
1321 Ambassador Bldg.
Theodore J. Weber (844)...6401 Manchester
Delbert S. Wenzlick (120).3658 W. Pine Blvd.

NEBRASKA

Alliance

Ethel J. Graham (626).....Box 244

Hastings

LaMoine Hillers (717)....231 N. Lincoln Ave.
W. A. Knicely (770)....124 N. Hastings Ave.

Lincoln

Walter L. Blore (674).....613 Sharp Bldg.

McCook

Lyle A. Wiedman (627).....501 E. First St.

Omaha

Arthur A. Allwine (718).....832 S. 24th
Helen E. Benedict (747)....2024 N. 16th St.
E. R. Clayton (677)....1001 City Natl. Bank
Albert J. Covert (719).....554 S. 25th Ave.
Harlan G. Easton (628)..527 Securities Bldg.
Victor C. Graham (678).....1701 Harney St.
Harold J. Grove (679).....208 S. 18th St.
William B. Hargleroad, III (464).....
Office 330, 1904 Farnam St.
Theodore H. Maenner (579).....
808 City Natl. Bk. Bldg.
Hiram S. Manville (720).....904 N. 40th St.
Harold C. Payne (721).....226 Barker Bldg.
Lloyd M. Peterson (680).....
500 First Natl. Bk. Bldg.
Lilyan A. Richards (722).....
808 City Natl. Bk. Bldg.
Jesse L. Schroeder (748).....1911 Harney St.
Robert W. York (655).....
500 First Natl. Bank Bldg.

NEW JERSEY

Asbury Park

Theodore F. Appleby (42).....
Main St. & Mattison Ave.

Atlantic City

Rudolph J. Bushell (219).....
245 So. Vermont Ave.
Bernard F. Dever (159).....
S. E. Cor. California & Atlantic Aves.
Joseph D. Farrington (160).....
21 S. Tennessee Ave.
Edward D. Gottlieb (121)..1516 Atlantic Ave.
Byron Jenkins (32).....
4803 Atlantic Ave., Ventnor
Russell C. Roney (72)....1421 Atlantic Ave.

Basking Ridge

Thomas F. Maher, Jr. (355).....
State Highway 32

Bayonne

Harold G. Tucker (887).....726 Broadway

Brooklawn

Leon M. Clair (162)..Broadway & Chestnut St.

Camden

John H. Abrams (772).....540 Cooper St.
Alexander Cooper (163).....700 Federal St.
Ellis Goodman (164).....515 Market St.
Earl R. Lippincott (165).....721 Market St.
J. William Markeim (43).....540 Cooper St.
Charles R. Myers, 2nd (24)..12 N. Seventh St.
C. Armel Nutter (74).....509 Cooper St.
Harold P. Nutter (166).....509 Cooper St.
Reba N. Obus (167).....101 N. Seventh St.
Abraham J. Rosenfeld (168)..709 Market St.
Roy R. Stewart (253).....142 N. Broadway

East Newark

Charles Toyen (510).....900 Passaic Ave.

East Orange

Henry M. Lesher (25).....58 N. Grove St.
Martin Reed, Jr. (845).....614 Central Ave.
George W. Seiler, Jr. (106)....520 Main St.
Harry A. Taylor (2).....520 Main St.

Elizabeth

Frank J. Brown (73).....160 Elmora Ave.
J. Carroll Dolan (629).....250 N. Broad St.
John D. Gumper (873)....261 N. Broad St.
Frederick H. Hoffmann (595)..1 Union Square
L. S. Kaufman (400).....107 Jefferson Ave.
Bertram B. Miller (80).....261 N. Broad St.
C. S. Stallard (353).....280 N. Broad St.
Max Tieger (122).....215 Broad St.
A. W. Van Horn (580).....250 N. Broad St.

Englewood

W. Gerould Clark, Jr. (970)....67 Dean Street
George R. Fessler (254).....98 Grand Ave.

Hillside

Louis J. Hess (682).....150 Hillside Ave.

Hoboken

Clinton B. Snyder (485).....61 Newark St.

Irvington
John M. Cullerton (630).1207 Springfield Ave.

Jersey City
Edward F. Carbin (169)....879 Bergen Ave.
Walter Koster (389)..2325 Hudson Boulevard
William F. May (395).....Kislak Bldg.
Harry V. Moser (333).....850 Bergen Ave.
Ben Schlossberg (267).....896 Bergen Ave.
Murray R. Siegel (170).....32 Journal Sq.
D. E. C. Somers (128).....700 Bergen Ave.
Anna S. Wolf (487).....389 Jackson Ave.

Kearny
Isidor Mintz (535).....508 Kearney Ave.

Maplewood
J. Lewis Fiacre (334)..1874 Springfield Ave.
Lionel C. Hartford (491).....71 Oakland Rd.

Merchantville
Harry A. Willson (28).Cove Rd. & Wayne Ave.

Montclair
George H. Stanton (436).....16 Church St.
Sydney M. Valentine (488).....16 Church St.
John Young, Jr. (489)....406 Bloomfield Ave.

Newark
Sidney G. Bedworth (354)...24 Branford Pl.
Seely Cade (46).....744 Broad St.
Harry Coddington (391)....50 Commerce St.
Thomas E. Colleton (581)....515 Clinton Ave.
David Cronheim (45).....39 Branford Pl.
Sargent Dumper (297).....744 Broad St.
Harry D. Epstein (865)....20 Branford Place
James J. Fitzsimmons (298)....51 Clinton St.
Walter J. Gill (582)....1180 Raymond Blvd.
Herbert E. Goldberg (475).....60 Park Pl.
W. Edson Huegel (492).....17 Academy St.
Ormonde A. Kieb (300).....18 Beaver St.
Sanford Krasner (493).....60 Park Pl.
Edward B. McCaffrey (125)....605 Broad St.
Herbert O. Metzger (793).....786 Broad St.
Louis J. Nass (301).....58 Park Pl.
Arthur G. Pulis, Jr. (749)....509 Orange St.
Albert C. Rachlin (521).....17 Academy St.
Joel L. Schlesinger (335).....31 Clinton St.
Milton Stern (495).....744 Broad St.
Harry J. Stevens (81).....478 Central Ave.
Leslie Stevens (683).....786 Broad St.
George N. Weiman (302).....60 Park Pl.

Newton
Adolphus Newman Lockwood (172).....
17 Main St.

North Bergen
Cristine B. Nolan (29)..4500 Bergen Turnpike

Paterson
Samuel P. Vought (123).....7-13 Smith St.

Plainfield
Albert R. Walker (393).....201 Park Ave.

Princeton
Edmund D. Cook (173).....186 Nassau St.

Ridgewood
S. William Walstrum (174).....
201 E. Ridgewood Ave.

Rutherford
Ellwood S. New (421).....6 Ames Ave.

Short Hills
Hawley Jaquith (390).....Canoe Brook Rd.

S. Orange
Frederic L. Wolf, Jr. (583).....
7 South Orange Ave.

Summit
Elmer G. Houston (684).....12 Maple St.

Teaneck
Alexander Summer (47)..791 Queen Ann Rd.

Trenton
Alfred J. Bernstein (596).....
Broad St. Bank Bldg.
H. S. Kline (176).....154 W. State St.

Union
Leonard J. Zehnbauer (48).....
998 Stuyvesant Ave.

Westwood
Walter E. Hudson (317)....25 Westwood Ave.
Clifton F. Trimble (497).....284 Third Ave.

NEW YORK

Buffalo
Harold E. Barker (631).....47 W. Huron St.
Joseph W. Becker (536)....19 S. Division St.
Luther H. Kendall (965)...1001 Genesee Bldg.
Richard B. Morris (925).....505 Abbott Rd.
Fenton M. Parke (906).....66 Niagara St.
Philip W. Ransom (537).....7 Court St.
Ellsworth Short (846).....170 Franklin St.
J. B. Wood (379).....2747 Main St.

Metropolitan City of New York

Borough of Brooklyn
James P. Clark (178).....478 Graham Ave.
Frank A. Matrunola (237)..6903 Fourth Ave.
Albert R. Mencone (377)..1176 Bushwick Ave.
Harry A. Moehring (378).....660 Fulton St.
I. Jerome Riker (888)....201 Montague St.

Borough of Manhattan
Herman A. Acker (82)...717 Lexington Ave.
Robert H. Armstrong (966)..12 E. 41st Street
Gordon S. Braislin (889)....545 Fifth Ave.
E. E. Burkhard (420)..E. B. Brooks & Co., Inc.
1 E. 57th St.
J. Francis Cahill (241).....235 W. 14th St.
J. Clydesdale Cushman (928).281 Madison Ave.
Dominick Di Giacomo (962).....
370 Seventh Avenue

Alice B. Dodd (456).....26 W. 8th St.
Arthur Eckstein (799).....370 Seventh Ave.
Matthew G. Ely (890).....76 William St.
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Herbert R. Houghton (394)....12 E. 41st St.
S. Edwin Kazdin (182).....90 Broad St.
George Keiller (423).....225 Fifth Ave.
Donald O. Kingman (584).....93 Worth St.
William MacRossie (86).....41 Park Row
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Jack N. Oppenheim (963).370 Seventh Avenue
Lloyd J. Phillips (891)....134 West 72nd St.
Howard M. Sonn (892).....4060 Broadway
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Frank S. O'Hara (437).....
40-10 82nd St., Jackson Heights

Westchester County

Raymond R. Beatty (256).....
72 Garth Rd., Scarsdale
Harry D. Cole (180).....
1 Stevens Ave., Mount Vernon
Owen A. Mandeville (750).....
364 Post Rd., Larchmont

Rochester

John J. Cokey (929).....53 E. Main St.

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L. T. Eagan (337)..205 Starrett-Syracuse Bldg.
George J. Goldstein (522).....
604 S. A. and K. Bldg.
Richard N. Groves (512)..121 E. Genesee St.
Donald T. Pomeroy (184)..327 Montgomery St.

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Ed Mendenhall (467)..116 W. Washington St.

Winston-Salem

Stuart Bondurant (453)..210 W. Fourth St.

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Kent L. Phillips (907).....
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Roy A. Heymann, Jr. (753)..213 S. Broad St.
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James H. Livezly (191)..... S. E. Cor. Sixth & Dickinson Sts.
John J. MacDonald (413)..... Real Estate Trust Bldg.
J. William Markeim (43)....1606 Walnut St.
William I. Mirkil (67).....123 S. Broad St.
D. O. Morton (231)..Walnut & Juniper Sts.
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Albert Quell (590).....1420 Walnut St.
Roland R. Randall (340)....1211 Chestnut St.
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Edward Rosewater (194)..... 209 Lewis Tower Bldg.
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Ralph C. Ziegler (687).....
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Jacob L. Rieser (549)....616 Washington St.
M. Duke Sowers (541).....533 Penn. St.
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Web C. Brown (949).....118 E. 8th St.
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John J. Heflin, Jr. (387).....
Columbian Mutual Tower
Will H. Higgins (414).....149 Monroe Ave.
Albert F. Kerns (424)..601 U. P. Bank Bldg.

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4th Ave., and Church Street.

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Irving F. Truitt (689).....438 Boush St.

Portsmouth

T. B. Lee (900).....403 Middle St.

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August Richter, Jr. (759)..... 152 W. Wisconsin Ave.
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R. M. KIRKLAND, CPM, Elizabeth, New Jersey
CARLO C. TIPALDI, CPM, Newark, New Jersey
RAYMOND R. KEANE, CPM, Philadelphia, Pennsylvania

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